

AMERICAN FRUITGROWER



line

1937

FIRESTONE TIRES AND AUTO SUPPLIES SAVE MONEY IN EVERY FARM OPERATION

EVEN though the prices of farm crops are advancing, the best way you can make more money is to **SAVE IT** in production costs.

YOU SAVE 25% in fuel costs and 25% in time by putting Ground Grip Tires on your tractor and all wheeled farm implements. They ride and pull easier and reduce repair bills.

YOU SAVE because one set of Firestone Tires will fit several implements. Your Implement Dealer or Firestone Tire Dealer has a plan whereby he will cut down the wheels on your present implements to a uniform diameter and weld a flat, steel rim to the end of the spokes. And by the use of Firestone Demountable Rims the tires and rims can be taken off one machine when not in use and applied to another.

YOU SAVE because Firestone Ground Grip Tires are built with **EXTRA** construction features. These

outstanding advantages are patented and used only in Firestone Tires. Gum-Dipping saturates and coats every cord with pure liquid rubber. This process counteracts internal friction and heat and makes the tire much stronger to resist the strains of the extra pull. The two extra layers of Gum-Dipped cords under the tread bind the tread and body together into one inseparable unit of tremendous strength. The scientific arrangement in spacing of the deep, rugged bars of the self-cleaning tread gives greater traction and drawbar pull.

YOU SAVE by buying NOW as tire prices are sure to advance. The price of crude rubber has advanced 110% and cotton more than 26% during the past two years. Tire prices are bound to go higher. Buy Firestone Ground Grip Tires NOW for your cars, trucks, tractors and all wheeled farm implements and make money by reducing your cost of production. See



your Implement Dealer, Firestone Tire Dealer or Firestone Auto Supply and Service Store TODAY.

The Farmer's Choice FOR RURAL HIGHWAYS

IT REALLY doesn't pay to drive on tires after the "non-skid" is worn off—in fact, the last 1,000 miles of wear in a tire are only



PRICES SUBJECT TO CHANGE WITHOUT NOTICE

worth about 38c. Why take the risk of a dangerous skid or perhaps fatal blowout when new Firestone Standard Tires cost so little?

More and more farmers are buying Firestone Standard Tires because they get the benefits of Gum-Dipping, the Firestone Patented process that counteracts internal friction and heat which ordinarily destroy tire life. They get longer non-skid mileage and unusually low cost per mile with dependable SAFETY.

It is almost unbelievable that so much tire could be bought for so little. Firestone developed this tire primarily for rural

SENTINEL TYPE	COURIER TYPE
4.40-21.... \$5.65	4.40-21.... \$5.43
4.50-20.... 6.05	4.50-21.... 6.03
4.75-19.... 6.70	4.75-19.... 6.37
5.25-17.... 7.70	
5.50-17.... 8.75	30x3½ Cl. 4.87
Others Proportionately Low	



AUTO RADIOS

6 All-Metal tubes. Sound diffusion. 8" dynamic speaker. Dash mountings for all cars.

HOME RADIOS

Complete line electric or battery sets. Walnut cabinets. Dynamic speaker. Airplane dial.



AUTO SUPPLIES FOR EVERY FARM NEED
FOR ADDITIONAL ITEMS SEE THE NEW 1937 FIRESTONE FARM CATALOG

SPARK PLUGS
Heavier electrode for better motor performance and more power.

BRAKE LINING
Firestone BRAKE LINING
Quick, sure stops in any weather. Special construction eliminates fading and chatter. Gives longer service. For cars, trucks, buses.

BATTERIES
Firestone BATTERIES
Power and dependability. Patented features insure long life.

FIRESTONE

**...ASSURES A HIGH PERCENTAGE
CONTROL OF CODLING MOTH...**

because of its

- 1 UNIFORM QUALITY
- 2 HIGH STRENGTH
- 3 QUICK KILLING POWER
- 4 COMPATABILITY WITH SUMMER OILS
- 5 HEAVY DEPOSIT
- 6 SAFETY TO FRUIT AND FOLIAGE

GRASSELLI Arsenate of Lead contains as high a percentage of killing ingredients as is possible to incorporate in an approved commercial lead. It has won the preference of critical fruit growers by its recognized quality and effectiveness.

GRASSELLI Arsenate of Lead contains the proper controlled relation of water soluble arsenic to arsenic oxide. This assures a quick kill without harmful effects to fruit and foliage under normal conditions.

In addition, it goes into easy suspension in the spray rig and works well through long lines, thus eliminating costly delays due to sludge, clogged screens and nozzles and blocked lines.

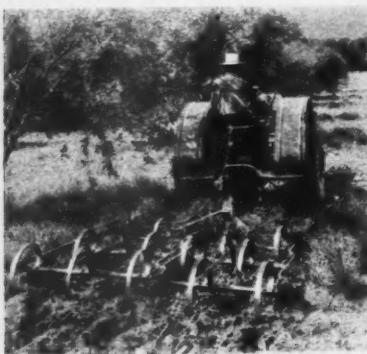
For Quality and Dependability, insist on Grasselli Arsenate of Lead.

ALSO
GRASSELLI
Bordeaux Mixture
Calcium Arsenate
Dutox*
Lime Sulphur Solution
Loro*
NuReform* Arsenate
of Lead
Paradichlorobenzene
Sulforon*
Grasselli* spreader
Sulphate of Nicotine
Sulphur
And many others
*(Reg. U. S. Pat. Off.)

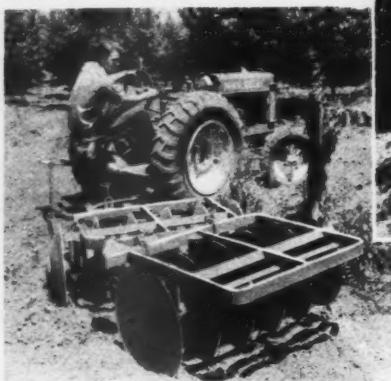


with John Deere Orchard Tractors and Equipment

At right: Model "BO" Tractor pulling a John Deere-Van Brunt "CC" Cultivator. The Model "CC" makes seed beds, destroys weeds, cultivates.



At right: Get to the bottom of your weed problem and provide a good mulch with the John Deere No. 3 Orchard Cultivator.



At left: This tractor-drawn John Deere Weed Destroyer rips out weeds and roots. It's a handy tool in almost every orchard or grove.



Make either right- or left-hand turns without stopping with a John Deere Model "OR" Disk Harrow; a money-saving harrow that does good work.



JOHN DEERE TWO-CYLINDER TRACTORS

SIMPLE — ECONOMICAL — DEPENDABLE

University of Idaho
LIBRARY

Town **MOSCOW** State **IDAHO**

- Disk Harrows
- Field & Orchard Cultivators
- Weed Destroyers
- No. 3 Cultivators
- Power Mowers
- Grove Plows
- Trailer Gears

SAVE MONEY—The simplicity of John Deere Orchard and Grove Tractors, resulting from exclusive two-cylinder engine design, saves money for owners. Parts are fewer, heavier, more rugged. They stand up better under heavy-duty work. You can easily inspect and adjust John Deere Tractors yourself without hiring outside help. John Deere two-cylinder engines burn the low-cost fuels successfully; the fuels that save you money every working day.

SAVE TIME—John Deere Orchard Tractors are as easy to handle as your automobile. Controls are convenient, steering is almost effortless, handy foot brakes enable you to make short turns around trees and at the ends of rows. You save time when time means money.

SAVE TREES—The fully streamlined Model "AO", with the pulling capacity of a 6-horse team, slips through your orchard or grove in a tree-saving way. The 4-horse capacity Model "BO" is also designed to protect low-hanging branches and fruit. Both tractors are easy on your trees as well as your pocketbook.

See these tractors at your John Deere dealer's, and remember, John Deere Orchard equipment is equally well built, saves still more money for you because of good work and long life. Write, today, for illustrated literature.

"DODGE HAULS MORE ON LESS GAS!"



Dodge 1 1/2-Ton Stake—6-Cyl., "L"-Head Engine—2 Wheelbases, 9' and 12' Bodies.



**"OUTPERFORMS
ANY TRUCK
I HAVE TRIED ON TOUGH
78-MILE RUN"**

"I have been buying and using trucks for 9 years. During this time I have had an opportunity to test different trucks under varying load conditions. A short time ago we tested one of the new 1937 Dodge trucks and I was simply amazed at the way this truck performed. Our tests show Dodge hauls more on less gas. It outperforms any truck I have tried on our daily tough 78-mile run under all route and weather conditions. You can quote me as saying 'any man who wants to see something new in the way of brilliant truck performance had better take a look at the new Dodge.'"
ANDREW SURPRENANT

**No WONDER AMERICA IS SWITCHING
TO DODGE!..PRICED WITH THE LOWEST!..**

DODGE quality truck features mean extra value for your money. And this extra margin of quality built into Dodge trucks is changing America's truck-buying habits. Proof of this is found in the fact that business men from coast to coast, literally by the thousands, are switching to Dodge trucks. When you go to buy your

next truck it will pay you, too, to forget about claims and compare-known, recognized, quality features. The truck "Show-Down" score card makes it easy for you to compare the low-priced trucks. Get a copy free from your Dodge dealer today.

DODGE
Division of Chrysler Corporation

Tune in on Major Bowes, Columbia Network, every Thursday, 9 to 10 P. M., E.D.S.T.
LOW DOWN PAYMENTS—LOW MONTHLY TERMS For your own protection, your dependable Dodge dealer will gladly arrange easy terms to fit your budget, at low cost, through Commercial Credit Company.

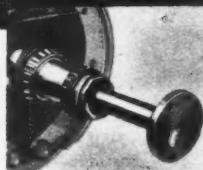
MORE HIGH-QUALITY FEATURES



• In low-priced trucks, Dodge pioneered the one-piece rear axle housing.



• Dodge pioneered roller-bearing universals in low-priced trucks.



• Full-floating rear axle was pioneered by Dodge in low-priced 1 1/2-ton trucks.

- Four main bearings instead of only three—another feature pioneered by Dodge in low-priced trucks.
- Four piston rings instead of only three—only Dodge of the lowest-priced three gives you this quality feature.
- Get a "Show Down" score card and see how many more extra-quality features Dodge gives you—See your Dodge dealer.



New 1937 Dodge 1/2-Ton Pickup, 6-Cyl., "L"-Head Engine, 116" W. B. A money-saver for farmers, plumbers, contractors, public utilities, etc.



SEE THE NEW 1937 DODGE passenger cars, now on display at Dodge dealers' showrooms. Only a few dollars more than lowest-priced cars. Big savings on gas, oil and upkeep. Switch to Dodge and save money.



FROM LARGE COLD STORAGE WAREHOUSE
SYSTEMS TO SMALL FARM INSTALLATIONS...



FRIGIDAIRE

MEETS EVERY FRUIT STORAGE EQUIPMENT NEED!

★ Frigidaire cold storage systems are the result of years of research and experience. In every detail they reflect the skill of Frigidaire and General Motors engineers, men who lead the world in fine mechanical developments.

Single compressor units by Frigidaire range from the smallest up to fifty horse power, and can be multiplied to handle the biggest warehouse job. Frigidaire installations can be designed with the type of cooling coil best fitting your need—whether it be pipe coil, fin coil, forced air evaporator with dry coil or brine spray.

Frigidaire fruit storage equipment pays for itself by preventing spoilage loss—keeping your crop in first class condition—enabling you to take advantage of top prices. Regardless of the installation size, you can be sure that Frigidaire does the job right and does it for less money. It's dependable and economical.

Find out how little it will cost you to have this money-making equipment for your crops. See your nearest Frigidaire Commercial dealer for free survey and estimate. Or write—

FRIGIDAIRE DIVISION • General Motors Sales Corporation • Dayton, Ohio



JUNE

1937

NO. 6

VOL. 57

AMERICAN FRUIT GROWER

The
NATIONAL FRUIT MAGAZINE

CONTENTS

Modern Cold Storage on the Fruit Farm	9
By Jonas Howard	
PLANS to Help You Plan a Cold Storage	11, 12, 13, 14
This Storage Offers Economy with Efficiency	
Attractive Storage Unit and Packing Room	
A Complete Unit, Packing and Sales	
Your Magazine Inspired This Storage"	15
By Edward Wiese	
State News	16
A Survey of Cold Storage Development on the Fruit Farm	
American Pomological Society	18
A Page Conducted in the Interests of the Society	
Converting Common Storages	19
Growth of Co-operative Storages	19
Buyer's Guide for the Fruit Farm	23-46
Classified Index to Directory Section	23

AMERICAN FRUIT GROWER

Published Monthly by
AMERICAN FRUIT GROWER PUBLISHING CO.
1370 Ontario St., Cleveland, O.

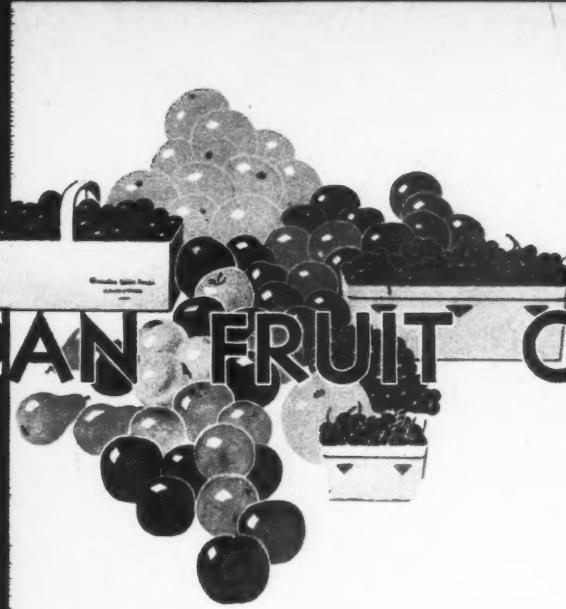
E. G. K. MEISTER
Publisher

DEAN HALLIDAY DR. J. H. GOURLEY
Managing Editor Associate Editor
S. A. KRAUSE WILLIAM H. ZIPF
Associate Editor Field Editor
T. J. TALBERT MARY LEE ADAMS
Contributing Editor Home Economics Editor

ROGER FISON, EASTERN MGR.,
Room 1212, 30 Rockefeller Plaza,
Phone—Circle 7-1863

NATIONAL ADVERTISING REPRESENTATIVES: J. C.
Billingsley Co., 123 W. Madison St., Chicago, Phone
Central 0465; 410 Lexington Ave., New York City, Phone
Murray Hill 2-3912.

SUBSCRIPTION RATES
Domestic, Except Cleveland, 3 years \$1.00, 1 yr. 50c.
Cleveland and Foreign, Except Canada, \$1.00 per year.
Canada, 50c per year.
Entered as second-class matter at Post Office at Cleve-
land, Ohio, under the Act of March 3, 1879. Additional
entry at Mount Morris, Illinois.



THE MIRACLE OF MODERN COLD STORAGE

B GROWS good apples. He consults his State Experiment Station frequently. He benefits from hearing the experiences of his fellow members in the State Horticultural Society. He prunes scientifically. He sprays thoroughly. His entire cultural program is sound, modern and carried out with methodical exactness. Because of this he generally has a larger yield of better apples than his neighbors, and, therefore in years of general low production he is usually in a position to make more money than they do. In heavy crop years, however, with markets glutted at harvest time, B's profits are often cut to the bone and sometimes it is all he can do to break even on his year's operations notwithstanding the fine quality and appearance of his fruit.

A also grows good apples. His cultural program is of as high a standard as B's. A's average annual yield, like B's, is generally higher than that of neighboring growers. A's terminal market facilities are also similar to B's, yet, in short crop years or in years of bountiful yields, A gets his price and makes a profit.

The answer is quite simple: **A** controls his marketing, while **B** does not.

A controls his market because a few years ago he became tired of seeing his good apples bring cull prices in glutted terminals. He investigated the possibilities of mechanically refrigerated cold storage on his farm and shortly thereafter he built one. Now at harvest time he sells, according to market conditions, enough of his total crop to obtain the ready money he needs. The rest, and the best, of his crop he puts into his farm storage. Here he holds it until price and demand enable him to pack and sell out of his own storage at a profit comparable to the quality of his fruit.

B, who is horticulturally minded only, takes his marketing as it comes and is vaguely glad when the selling season is over. He has had several sad, and rather costly, experiences with commercial cold storage in the terminals of his nearest large city market and now prefers to turn his entire crop over for cash at harvest time. So far, he can't see the possibilities for himself of cold storage on the farm, although he admits, "it may be all right for some growers." Thus **B** is content to let the market control him.

The result is that, although **A** and **B** are on even terms from the standpoint of horticulture, **B** makes a profit only some years, while **A** makes money every year.

That is the miracle of modern cold storage, under proper conditions, on the fruit farm.

YEAR AFTER YEAR . . . SEASON AFTER SEASON



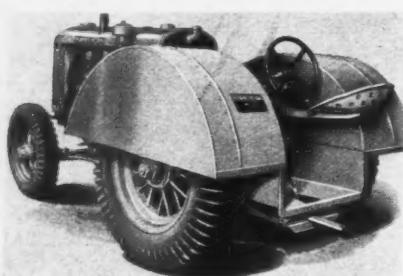
Above: The versatile McCormick-Deering O-12 Tractor pulling a load of apples in a western orchard.

McCORMICK-DEERING TRACTORS POWER YOUR ORCHARD JOBS AT LOW COST

When you buy a McCormick-Deering Tractor for work in your orchard, you are sure of getting the greatest tractor value for your money. What is more, you have the assurance that the tractor will be on the job year after year with a minimum of upkeep and repair costs. Recommended for

work in orchards are four McCormick-Deering Tractors: the Model O-12 grove tractor; the Model 10-20 and Model W-30 with new orchard features; and the Model T-20 TracTracTor, a powerful, accessible crawler tractor. All are easy to maneuver around trees and under low-hanging

branches. All are compact, economical on fuel, and adapted to work with many different orchard implements. Ask the near-by McCormick-Deering dealer to tell you more about these tractors.



Above: McCormick-Deering W-30 Tractor specially equipped with new orchard seat attachment, orchard fenders, and pneumatic tires. Special orchard equipment is also available for the McCormick-Deering 10-20 tractor.



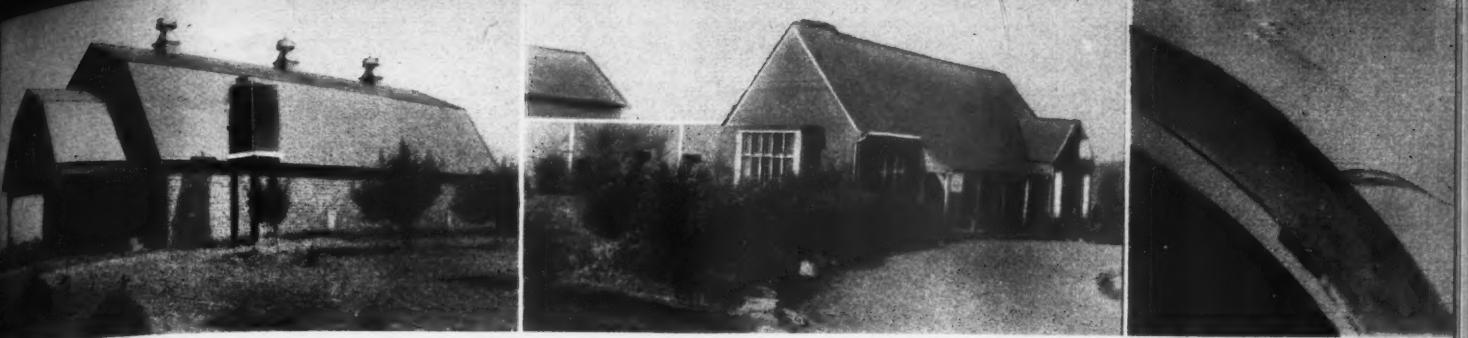
Above: Spraying the orchard with a McCormick-Deering T-20 TracTracTor supplying the power. The sprayer is operated direct from the tractor by means of the power take-off.

INTERNATIONAL HARVESTER COMPANY
(Incorporated)

606 So. Michigan Ave.

Chicago, Illinois

McCORMICK-DEERING TRACTORS



MODERN COLD STORAGE on the FRUIT FARM

By JONAS HOWARD

"DOES it pay," I asked, "to operate your own mechanical cold storage on the farm?"

My grower friend's face flushed slowly but that, I realized an instant later, was due to the fact that we had just stepped from the interior of his storage house, where the temperature was constant at 33 degrees, into the bright sunshine of out-of-doors and a temperature of 85 degrees. My own face by now was also flushed and red from the sudden change of temperatures.

"Well," he answered, "figure it out for yourself. It costs me about 15 cents per bushel to provide my own cold storage, 20 cents at the maximum. And by holding for a right market, I get all the way from 25 to 50 cents per bushel as a premium price for my best apples." And then we fell to discussing investment costs, the convenience of holding fruit on the farm at harvest time, the advantage of grading and packing during the winter months to suit the requirements of individual purchasers or the market, and the wider choice of markets available after the "glutted" season is past.

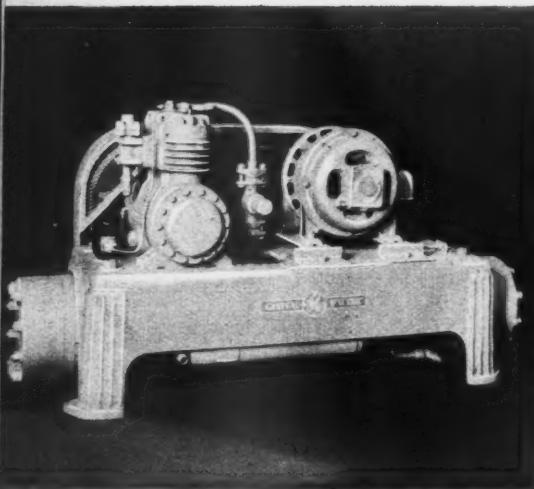
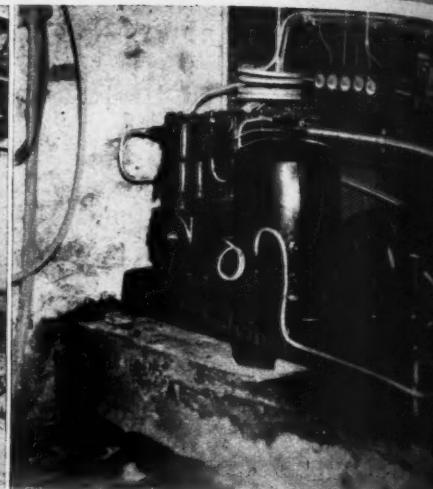
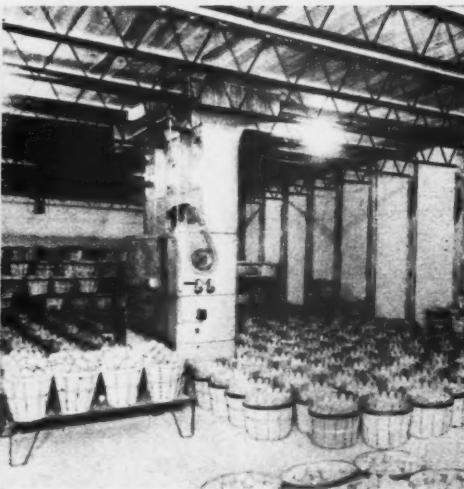
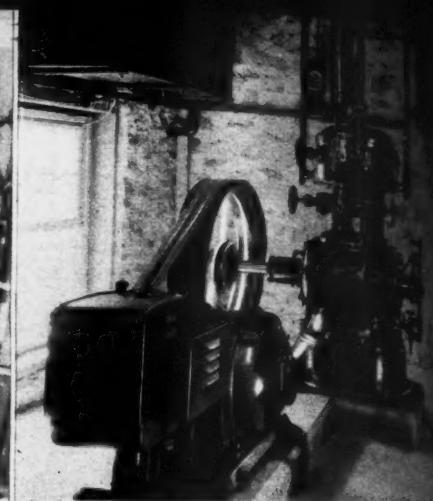
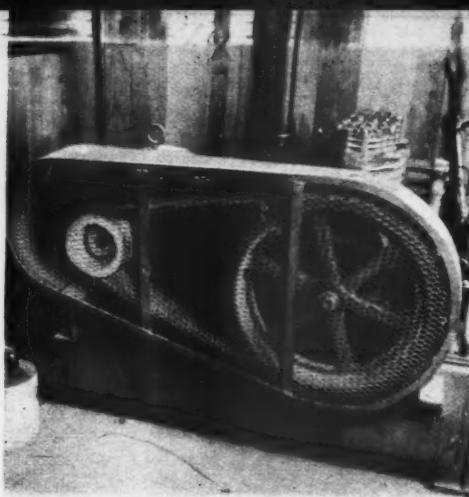
Along with an increasing trend to grower-owned refrigerated storages on the

(Turn to next page)

Top, left to right—The Philip Klenk cold storage in Sparta, Mich. Cold storage and salesroom on the Neal Fruit Farm, West Richfield, Ohio. Below, right—The Muselman Cold Storage in Gardners, Pa. Bottom—Grand River Orchards packing house and cold storage, Geneva, Ohio.



Top row, left to right—Frigidaire refrigeration unit serving Ochs Fruit Farm storage, Ohio. Frick compressor in Hillcrest Orchard cold storage, West Virginia. Center row, left to right—General Electric model "Scotch Giant" condensing unit. Carrier cold diffuser in Shaw Orchard cold storage, Pennsylvania. Kelvinator refrigerating equipment in William Zech storage, Michigan. Right, below—Piling boxed apples in a Vilter refrigerated 75,000-bushel Grand River Orchard cold storage, Ohio.



farm (in some instances group-owned storages) it has also been argued that first costs and operation costs considered, farm storage, used for only a few months each year, would cost more than commercial storage. In practice this has not generally proved to be the case.

C. I. Gunness, head of the Department of Agricultural Engineering, Massachusetts State College, is authority for the statement that, as a rule, farm storages are actually built at lower cost per bushel capacity than equivalent space in larger plants, and overhead for supervision and management is less. Costs will vary in each individual case but, as a rough estimate, a new building can be erected and equipped on the farm at from 60 cents to \$1 per bushel of capacity. Operation costs, not including labor, will run from 10 to 20 cents per bushel.

Let us suppose that you as a grower have decided to build a refrigerated storage. Recent extension of rural electrification in your neighborhood has provided for the first time, perhaps, a reliable source of power for the operation of a cold storage plant. Or it may be you are planning to utilize Diesel power because electricity is still not available in your territory. But you want to know first what kind of a building to erect.

If you are considering converting a common into a mechanically refrigerated storage, your problem calls for advice on remodeling, insulation

and refrigerating machinery. If you are planning a new structure you must consider specific location or relation to other buildings on the farm.

Exterior appearance and good design should not be entirely overlooked in planning a storage. The storage itself will bring customers to the farm. And whether such customers are commercial buyers or individual consumers the likelihood of having them return for more purchases will be enhanced by the attractiveness of the building or buildings.

Every modern design for a cold storage plant includes a packing room. This should be well lighted, preferably by skylights. Depending upon size or the amount of money that can be afforded for the storage building, it should also provide space for a combination office and salesroom. If a salesroom is to be included in the storage building, ample parking space for customers' cars should also be provided off the main road. Landscaping of the approaches to the salesroom and about the storage plant will also pay for itself in added customer appeal.

Fundamental in the construction of a storage is the ability of the structure to permanently resist the passage of air and moisture. It should also be made as fireproof as possible. The storage can be built of concrete, brick, glazed tile, concrete block, or, if economy dictates, of frame construction.

One national authority on refriger-

ation problems, H. G. Brandt, draws attention to the opinion, widely held, that it is extremely desirable to erect the storage building so that much of it is placed against a hill or partly underground. This is on the theory that a smaller refrigerating load will then prevail on this basis. The fact is, as he points out, the ground temperature does not vary widely over the span of the various seasons. Thus, he says, it becomes plain that cold storage walls erected against ground always have a heat leakage whereas walls not so protected will have a higher leakage during the early fall months, but as the fruit picking season progresses and the winter months come, the heat leakage is less and at certain times even negative, so that heat is leaking from

(Continued on page 21)

Plans

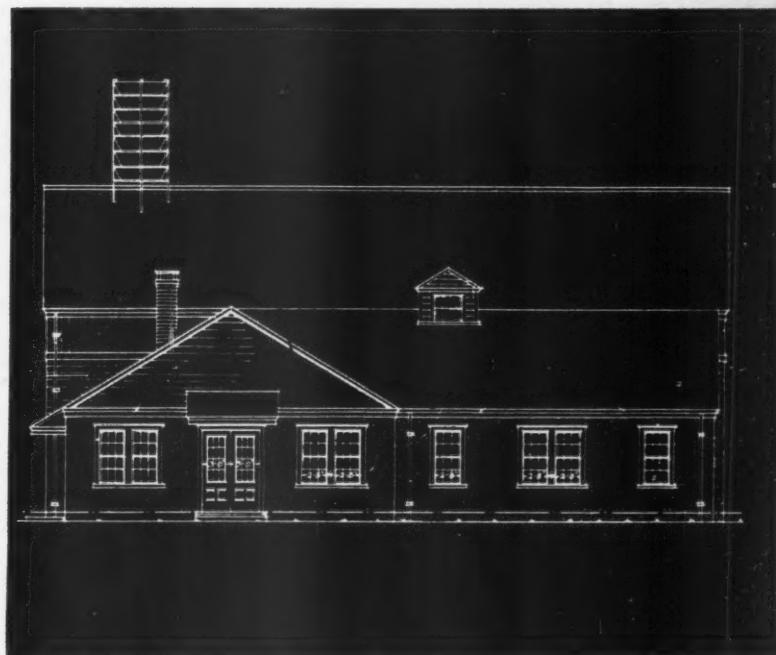
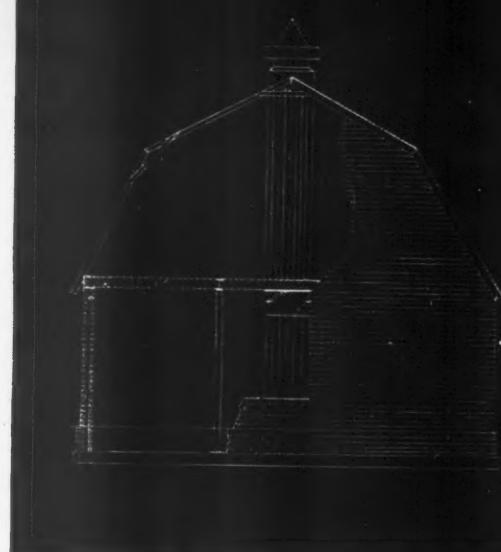
TO HELP YOU PLAN A COLD STORAGE

Fruit production practices vary from section to section and from State to State throughout the country. The same principle is true when we consider plans for fruit farm storages for different localities. Reproduced on the following pages are plans showing three types of storages from 5,000-10,000 to 25,000-30,000 bushels capacity. These storages range from a low cost, yet efficient unit to the larger and more expensive structures, embracing storage, packing and salesroom facilities.

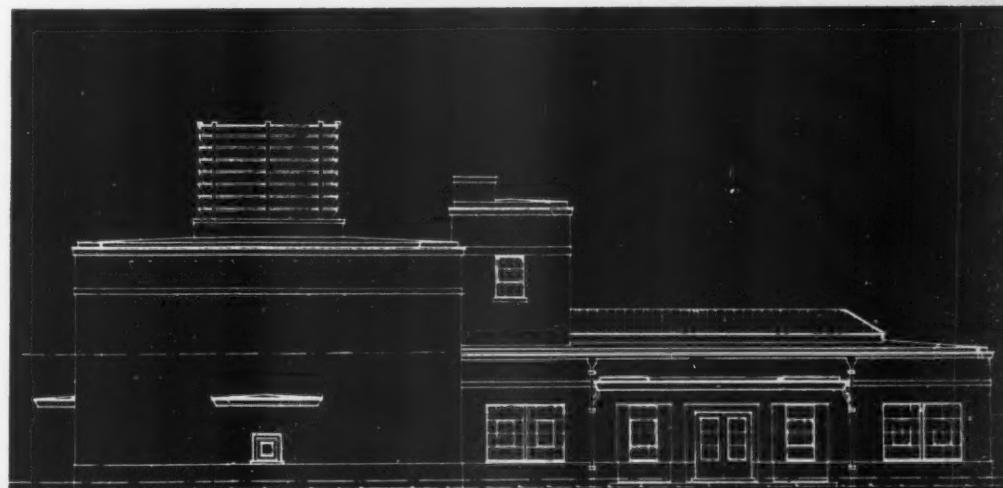
While the plans as here reproduced may seem to be adequate for actual building, growers contemplating the construction of storages are urged to consult their State Experiment Stations and Extension Services for cold storage plans and construction details best adapted to their situations. Construction, insulation and refrigeration machinery information is available from competent research workers and engineers in the cold storage field.

The plans for the two larger types of storages are published through the courtesy of the Northeast Regional Plan Service of the Vermont Agricultural Extension Service, University of Vermont, in co-operation with the U.S.D.A., while the smaller storage is shown through the courtesy of the Kalamazoo Tank and Silo Company of Kalamazoo, Mich.

5,000-10,000 BUSHEL CAPACITY



20,000-25,000 BUSHEL STORAGE, PACKING ROOM AND OFFICE



25,000-30,000 BUSHEL STORAGE, PACKING ROOM AND SALES OFFICE

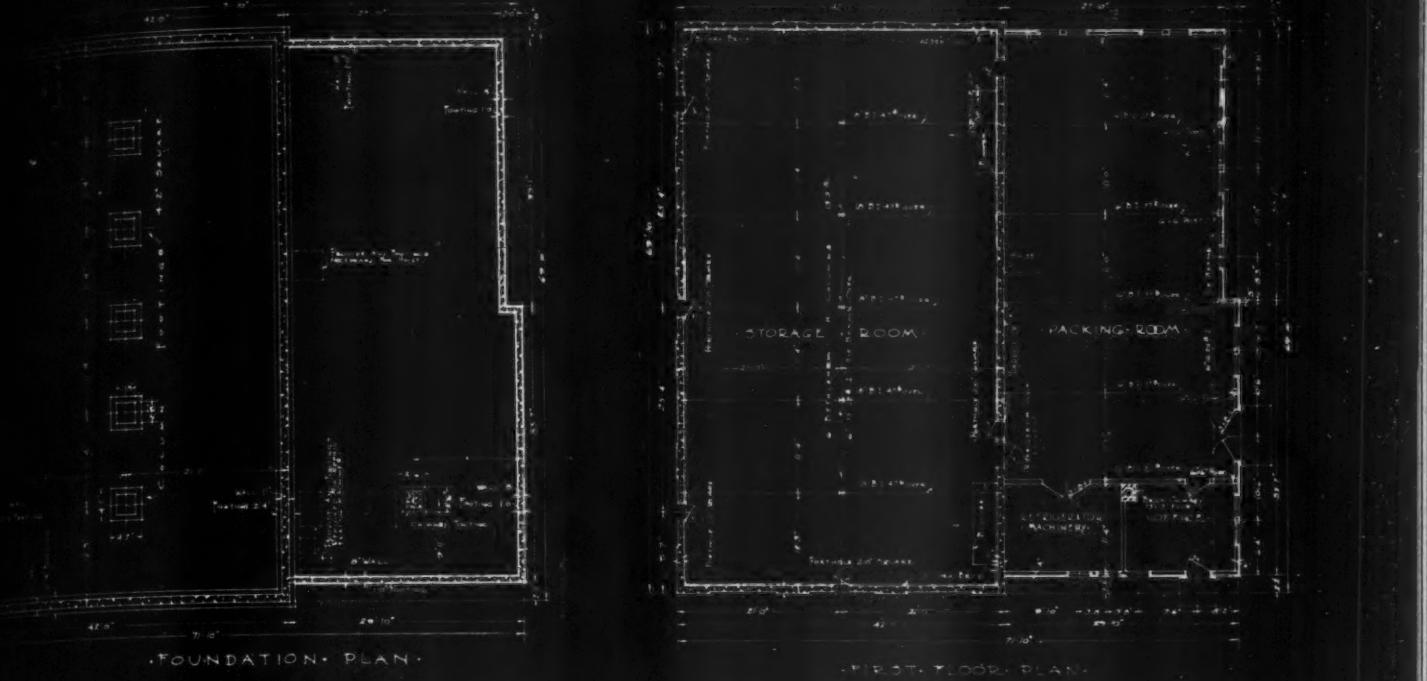


THIS STORAGE OFFERS ECONOMY WITH EFFICIENCY

Shown on this page are plans for a fruit farm storage of 10,000 bushels capacity. Construction is glazed double tile wall with gambrel roof. Storage space for packages is provided in a loft. Alteration of plans according to individual requirements will allow addition of salesroom and fruit farm office. Floor is constructed about two feet below grade which increases storage humidity and cuts down total height above grade. While these plans are for common storage, the building can be easily converted into cold storage by installation of refrigeration equipment and increasing the amount of insulation. A storage building 24' x 45' with 14' floor to ceiling height approximates a storage providing for 5000 bushels of apples, allowing 2 $\frac{1}{4}$ to 2 $\frac{1}{2}$ cubic feet of storage space per bushel of apples.

SIDE ELEVATION





FOUNDATION PLAN

FIRST FLOOR PLAN

ATTRACTIVE STORAGE UNIT AND PACKING ROOM

A large packing room adjacent to the cold storage proper features the plans for this 20,000 to 25,000-bushel refrigerated apple storage. Accessibility to the storage from the packing room permits quick disposal of fruit into the storage after packing or vice versa if fruit is packed out during the winter. Blower type refrigeration is provided with capacity to handle warm fruit load and to maintain low temperatures during long storage period. Heavy insulation is specified to prevent loss of low temperatures or entrance of warm outside air. Second floor of packing room provides storage space for fruit packages. Design of the concrete exterior walls and clapboard siding above the walls lends attractiveness to the building. All concrete and stucco surfaces are whitewashed and portholes are painted dark green.

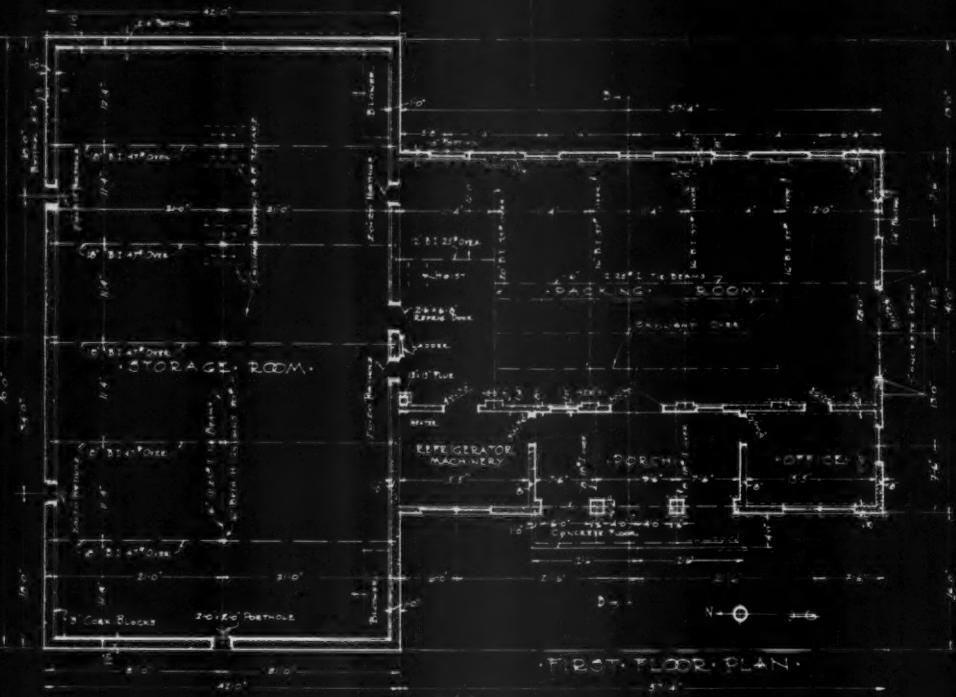
SECOND FLOOR PLAN

WEST ELEVATION

SOUTH ELEVATION

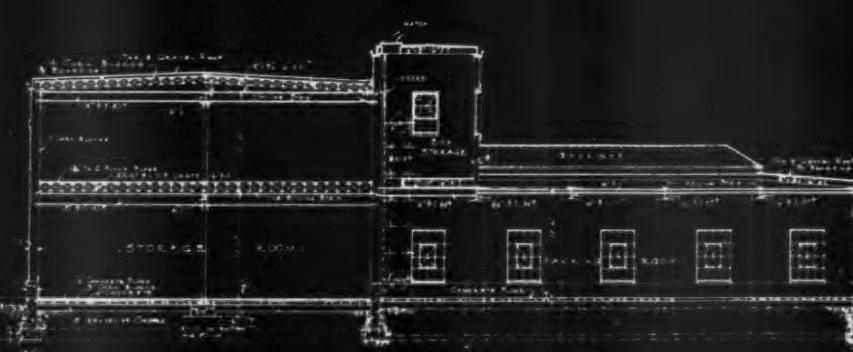
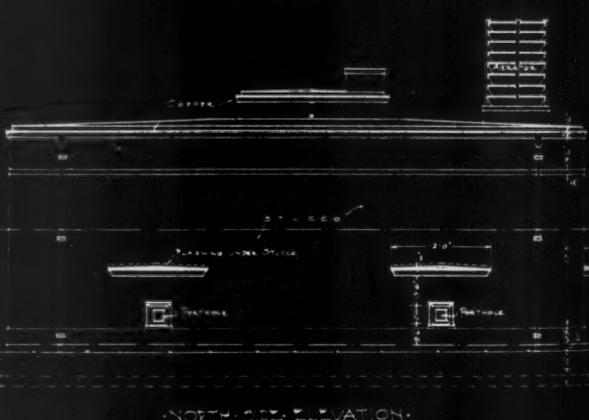
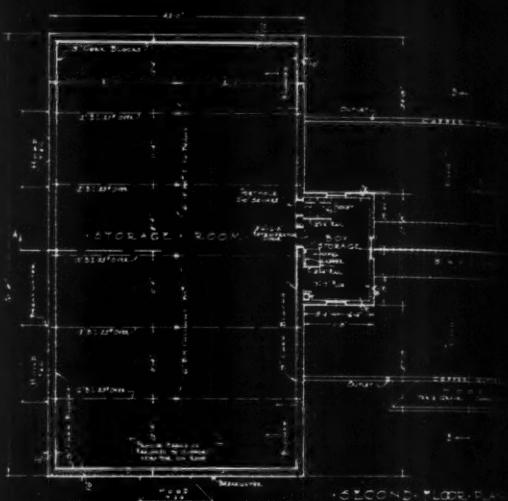
NORTH ELEVATION

WEST ELEVATION



A COMPLETE UNIT, PACKING AND SALES

This two-story refrigerated cold storage with packing room attached is an ideal type for 25,000 to 30,000-bushel and larger cold storages utilizing blower type refrigeration. Space is also provided for the fruit farm office, making a complete and efficient unit. A concrete ramp facilitates easy entry to packing room lighted by large skylight. The second-story storage room construction is similar to that of the first floor room. A hoist is provided for efficient conveying of fruit to the second story. Roof is of tar and gravel. Walls are poured concrete faced with stucco. Copper gutters and leaders are recommended. A package storage is provided on the second floor between the second-story storage room and the skylight. This package storage room also houses the hoist equipment.



O
ing a
bushe
space
eight-
ceiling
center
of one
ing m
and u
thick,
plicat
For a
anhyc
tion.
after
therea
A f
struct
ing an
Fat
storage
Grow
cour
turer.
appro
JUN



By Edward Wiese

OUR brick storage building is 26 by 46 feet, furnishing approximately 10,000 cubic feet for about 4000 bushels of fruit. Wall is 10 inches wide with an air space of one inch through the middle. Heavy three by eight-foot joists, supported by two beams, carry the ceiling load. Thus we have one large room with no center supports. Walls are plastered with a mixture of one part cement to two parts sand. A waterproofing material has been applied over the plastered base and upon this two layers of corkboard, each two inches thick, have been applied with hot asphalt. Final application on inner surface has been a mastic coating. For a refrigerating unit we decided upon a full-flooded anhydrous ammonia plant with ample amount of radiation. This part of the cold storage work is to begin after July 15 and will be completed within 30 days thereafter.

A frame packing house 24 by 50 feet has been constructed in front of the storage to house the refrigerating and packing machinery and provide storage space.

Father and I did all of the work in constructing the storage and packing house which AMERICAN FRUIT GROWER inspired. The refrigeration machinery is of course being installed by the engineers of the manufacturer. Cost of insulating materials and machinery is approximately \$3500, not counting our own time.

Top, left—Construction work on the Wiese fruit storage in Berrien County, Michigan, was started in August, 1936, and completed in the spring of 1937. The refrigerating machinery is now being installed.

Top, right—The frame packing house built in connection with the Wiese storage faces the highway. A large pool and gardens are planned to beautify the surroundings and act as a magnet in attracting motorists.

Bottom—Front view of the packing house as it appeared in September, 1936. The village in which the 40-acre Wiese orchard and refrigerated storage are located is four miles long and less than 1000 feet wide.

STATE NEWS

A SURVEY OF COLD STORAGE DEVELOPMENT ON THE FRUIT FAR

ALABAMA—While our commercial apple crop is not great, both common and commercial cold storage are used for a small percentage of the later varieties.—L. M. WARE, Auburn.

ARIZONA—Orange and grapefruit grower associations affiliated with the California Fruit Growers Exchange are making plans to install refrigeration equipment for handling a considerable number of carloads of fruit during the next marketing season. One outstanding individual grower-owned cold storage, in operation many years, successfully holds apples for the winter and spring.—A. F. KINNISON, Tucson.

CALIFORNIA—Of the nine cold storage plants in the famous Watsonville district, two are commercial, two co-operatively owned and operated by growers, and five—constructed within the last five years—grower-owned, with another grower-owned under construction. Capacity of grower-owned storages ranges from 50,000 to 250,000 boxes each, with apples being their chief crop.—FRANK I. KELLOGG, Watsonville.

CONNECTICUT—By the end of 1935, number of grower-owned refrigerated storages totaled 22, with capacity of 284,500 bushels. Activity continued through 1936, and a number of storages are projected for 1937. Trend will undoubtedly continue for several years.—L. L. SAMMET, Storrs.

DELAWARE—Successful operation for past five years is promising record of one grower-owned cold storage. Other cold storages have been erected through stock subscriptions taken mostly by fruit growers.—W. T. DICKSON, Dover.

IDAHO—Modern grower-owned cold storages are unknown to date, although many growers are using common storages which are proving unsatisfactory.—W. T. CALLENDER, Boise.

ILLINOIS—Conversion of many common storages into cold storages is imminent. While supplied with ample commercial cold storage facilities, growers would be at a decided advantage over competitors who ship into their territory were they equipped with their own cold storages.—J. B. HALE, Salem.

INDIANA—Common storage is proving to be the stepping stone to grower-owned refrigerated storage. Capacity of recent grower-owned cold storages ranges from 9,000 to 50,000 bushels. Nobody realizes better than the grower the importance of proper storage facilities in attempting to supply the growing public desire for well-preserved apples the year round.—EVERETT WRIGHT, Lafayette.

IOWA—While individual common storages seem to be the rule, and the trend is still in that direction, interest in converting these storages into refrigerated units is being aroused.—H. H. PLAGGE, Ames.

KANSAS—Both grower-owned common and cold storage facilities may be found in the Arkansas River Valley apple section of Kansas.

PAGE 16

Apples from the heavy producing section in northeast Kansas are shipped to cold storages in nearby cities.—G. W. KINKEAD, Topeka.

KENTUCKY—Movement is on foot looking toward building of cold storages by co-operative effort. Changeover of some common into cold storages is contemplated.—BEN E. NILES, Henderson.

MAINE—With more open roads during our long cold winters, better transportation, and more attention to local markets, signs are apparent that more apples will be stored at home.—J. H. WARING, Orono.

MARYLAND—Four of the five grower-owned cold storages have been made over from common storages, being originally built so as to be easily convertible. Capacities 4000 bushels to 50 cars (528 bushels per car). The latter storage is to be enlarged this year by additional 40-car capacity. More growers are looking forward to converting their storages.—A. F. VIERHELLER, College Park.

MASSACHUSETTS—At present we have 37 country point cold storage plants for apples. Of these 37 storages, 28 are farm located and owner operated for their own fruit, with total capacity around 450,000 bushels. The other nine are made up of custom storages, with total capacity about 650,000 bushels. I look to see cold storage capacity at country points expand to 1,500,000 bushels in the next three or four years, particularly since many non-commercial growers have 100 or 500 or even as many as 1000 or 2000 bushels of apples they would like to store if there was a place handy.—W. R. COLE, Amherst.

MICHIGAN—We have probably a couple of hundred common storages and three or four cold storages, with the trend toward cold storage.—H. D. HOOTMAN, East Lansing.

MINNESOTA—First mechanical refrigeration to be installed in a grower-owned storage in the State is on the Andrews Orchards at Faribault the past winter. A carbon dioxide unit rated at 25 tons of ice per day will be operated to hold fruit at proper temperature during winter and nursery stock during spring.—J. D. WINTER, St. Paul.

MISSISSIPPI—Construction work is being completed on 11 cold storage and warehouse units under a co-operative agreement with the State extension department, county and municipal authorities, and WPA. It is expected one unit at least in each plant will be used for storing fruits and vegetables.—W. M. CRUMPTON, State College.

MISSOURI—Construction of two grower-owned cold storages during the present summer in anticipation of the 1937 crop indicates the trend. Use of common storage is limited owing to unfavorable temperatures until late fall.—W. R. MARTIN, Jr., Columbia.

MONTANA—Absence of commercial cold storage plants at concentrated points where volume can be secured has seriously crippled the fruit industry and is limiting the markets

to a very close area. Present trend is toward erection of more plants at concentration points.—GEORGE L. KNIGHT, Missoula.

NEBRASKA—Commercial cold storage companies have ingratiated themselves with their fruit grower customers by not only acting as a collection agency but also finding buyers for the fruit stored in their warehouses. Growers consequently have not to date felt the need for constructing their own storages.—E. H. HOPPERT, Lincoln.

NEW HAMPSHIRE—Total of 24 common apple storages in 1934 has increased to 29, while cold storage units have increased from six to eight during the same period. A co-operative storage at Wilton takes care of about 10,000 bushels while a custom cold storage at Manchester holds several grower's crops.—C. O. RAWLINGS, Durham.

NEW JERSEY—Approximately 25 grower-owned cold storages are very satisfactorily holding the crops of as many growers. There is a possibility of this number increasing this year either through construction of new buildings or conversion of farm buildings. Average capacity of these storages is probably between 10,000 and 15,000 bushels.—ARTHUR J. FARLEY, New Brunswick.

NEW YORK—The small privately owned cold storage plant for fruit has been steadily on the increase in the fruit industry of the East for the last 10 or 15 years. Figures for 1935 from Ulster County in the Lower Hudson River Valley prepared by Prof. G. P. Scoville of Cornell University showed that seven of 60 growers interviewed had their own cold storage plants. The apples raised and stored by these seven growers amounted to nearly one-third of all the apples stored. An additional 15 per cent was placed in these storages by neighboring growers.—H. B. TUKEY, Geneva.

OHIO—Successful operation of a number of grower-owned cold storages is creating interest among other growers, many of whom contemplate converting their common storages. Plans are being completed for a 50,000 bushel co-operative cold storage.—F. H. BEACH, Columbus.

NORTH CAROLINA—Cold storage facilities on the R. W. King Orchards near Raleigh take care of 40,000 bushels of apples and peaches, while the cold storage plant of A. R. Barber at Waynesville serves an apple orchard producing between 50,000 and 100,000 bushels. Fruit from other orchards not moved immediately after harvest is placed in common storage.—H. R. NISWONGER, Raleigh.

OKLAHOMA—For the most part construction within recent years has been of common storages.—FRANK B. CROSS, Stillwater.

OREGON—Trend is towards centralized cold storage by co-operatives, independent processors, and commercial cold storage plants. The Apple Growers Association at Hood River, having about 75 per cent of the top

JUNE, 1937

is increasing its cold storage facilities. The Springbrook Co-operative in Yamhill is rebuilding its plant and putting in cold storage. There is activity in other sections as well.—O. T. McWHORTER, Corvallis.

PENNSYLVANIA—A large number of grower-owned cold storages have been constructed. Capacity of the 12 cold storages being built this year ranges from 4,000 to 35,000 bushels.—J. U. RUEF, State College.

RHODE ISLAND—About 15 per cent of the apple crop is stored at present in grower-owned cold storages. Increased activity is expected. Capacity of storages ranges from 3,000 to 25,000 bushels.—E. P. CHRISTOPHER, Kingston.

SOUTH CAROLINA—The size of our apple industry so far does not justify construction of grower-owned cold storage plants. Our peach industry is of good size and a number of growers pre-cool their fruit. Apples and peaches are stored to some extent in local public storage.—A. E. SCHILLETTER, Clemson.

SOUTH DAKOTA—With extensive plantings of the long-keeping Haralson apple, interest in cold storage will undoubtedly be aroused.—W. A. SIMMONS, Sioux Falls.

TENNESSEE—During the past five years construction of refrigerated storages and insulated common storages has shown remarkable growth. One of the largest units is the 50,000 bushel cold storage serving the 300-acre apple orchard of Bonham Brothers at Shady Valley. Common storage serves a number of growers who operate roadside markets, and many small growers have some form of insulated common storage. Because of lack of custom storage facilities in many of the smaller cities, growers serving these markets are hoping the extension of low-cost electricity and improvement in insulated construction and refrigeration machinery will enable them to construct cooperative storages.—A. N. PRATT, Nashville.

TEXAS—Taking electric power to the front door of the farm is responsible for present increase in cold storage facilities.—J. F. ROSEBOROUGH, College Station.

UTAH—While we have very few grower-owned storages, growers are using public cold storage facilities more extensively now than they did several years ago, particularly for fancier grades.—FRANCIS M. COE, Logan.

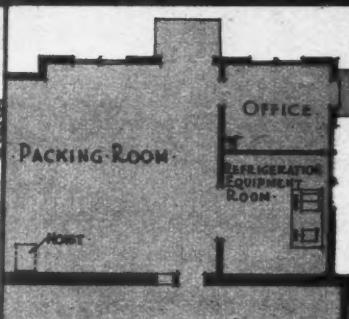
VERMONT—A limited number of apple growers are converting their common storages into cold storages. There are discussions and plans for cooperative cold storage plants.—M. B. CUMMINGS, Burlington.

VIRGINIA—More than one-fourth of the 6,000,000 bushel apple cold storage capacity available in Virginia and Washington, D. C., is grower-owned and controlled. The Winchester (Va.) Cold Storage, with capacity for more than 1,400,000 bushels, is owned and controlled by growers. The Crozet (Va.) Cooperative Cold Storage Company, capacity 120,000 bushels, is grower owned and controlled. Bonham Cold Storage and Produce Company, owned by Bonham Orchards at Chilhowie, Va., has capacity for 60,000 bushels, in addition to their Tennessee orchards plant. Small individual storages have been constructed by growers within the past three or four years. Because of the tendency of some commercial storages to maintain high rates, increased interest in grower-owned cold storages is expected.—W. S. CAMPFIELD, Staunton.

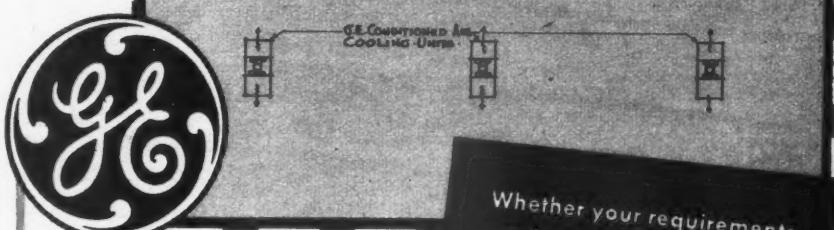
WEST VIRGINIA—Trend in commercial apple and peach orchards is strongly toward construction of grower-owned cold storages. Several have been built within the past five years, among them the 100,000 bushel storage of Consolidated Orchard Company at Paw Paw. About 10 per cent of the apples are kept in grower-owned cold storage at present.—CARROLL R. MILLER, Martinsburg.

JUNE, 1937

Fruit Storage Refrigeration that COSTS YOU NOTHING!

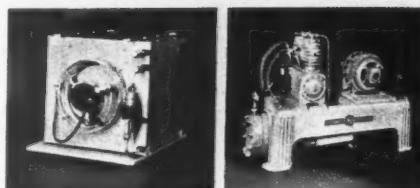


REFRIGERATED STORAGE ROOM



GENERAL ELECTRIC CONDITIONED-AIR REFRIGERATION PAYS ITS OWN WAY ...THEN PAYS YOU!

Whether your requirements are large or small, General Electric provides the ideal refrigeration equipment for any fruit storage job, and complete service from layout to installation.



**GENERAL ELECTRIC
CONDITIONED-AIR
COOLING UNIT**
Cools, humidifies and washes the air in fruit storage rooms. Patent No. 1,988,319.

G-E "SCOTCH GIANT" REFRIGERATING MACHINE

Rugged, powerful, dependable, THRIFTY. Sizes from $\frac{1}{4}$ h. p. to 50 h. p.

MAIL THIS COUPON NOW!

General Electric Company,
Commercial Refrigeration Div.,
Sec. AF6, Nela Park, Cleveland, O.
Send complete information on refrigerated fruit storage. No obligation.

Name *LIBRARY*
Address or R. F. D. No. *LIBRARY*
Town *MOSCOW* County *IDAHO*
State *LIBRARY*

GENERAL ELECTRIC

APS

A PAGE CONDUCTED IN THE
INTERESTS OF THE AMERICAN
POMOLOGICAL SOCIETY

Fruit Tour West of Mississippi

LAST month your attention was called to the tour being planned by the A.P.S. to visit the chief fruit growing regions lying west of the Mississippi River.

Interest in the tour is developing very satisfactorily, and it is hoped that 60 or more people will avail themselves of this opportunity to see the great and progressive fruit growing regions of the West. A conducted tour of this kind brings together many leaders in the industry and makes possible many contacts in the regions visited not ordinarily available to the tourist.

Arrangements are being made so that at each stop the party will be extended many courtesies, enabling us to see and meet the fruit industry to the very best advantage. The side trips are planned to include some of the most famous scenic spots in America.

John T. Bregger, 209 West Main Street, Waynesboro, Pa., is chairman of the tour arrangements committee, and those who plan to make the tour should write him their intention at once.

Some Fruit Production Statistics

The U.S. Census of Agriculture for 1935 says that "The outstanding changes in tree and vine fruits on farms in the five-year period from 1930 to 1935 were substantial increases in the number of cherry, grapefruit and orange trees, marked decreases in the number of apple and peach trees, and moderate declines in the number of pear and plum trees and in the number of grape vines... A further change of importance during this period was a decline in new plantings for each of these fruits as evidenced by the number of living non-bearing trees."

"The total number of grapefruit trees January 1, 1935, was 13,161,101, which was 42 per cent greater than on April 1, 1930. About three-fourths of the 1935 number of trees were of bearing age." Florida and Texas are the chief grapefruit producing states. Texas greatly increased its planting of grapefruit trees and has nearly four times as many non-bearing trees as are in Florida.

From 1930 to 1935 orange tree plantings increased 22 per cent. California and Florida together produce more than 95 per cent of the oranges grown in the United States.

Sour cherry plantings are reported as having increased 16 per cent from 1930 to 1935. Michigan leads in production, and New York is second. On the Pacific Coast the sweet cherry is grown extensively in California, Oregon and Washington.

Apples and Peaches

Apples occupy a larger acreage than any other fruit, but a decline in the number of trees is reported to be 14 per cent in the five-year period. About one-sixth of the 100,054,047 apple trees are in the non-bearing class.

For a number of years Washington has led all other states in apple production and is credited with producing around 25 per cent of the United States crop. The five western states, Colorado, Idaho, Oregon, California, and Washington, produced a total of nearly 30,000,000 bushels of the short total commercial crop of 66,000,000 bushels produced in 1936. In the East, New York, the Virginias, Pennsylvania, and New Jersey are important apple producing regions, while in the Middle West, Michigan, Illinois, and Ohio are the ranking states.

In peaches, the western states are leaders in production and usually produce a third or more of the crop. California far exceeds any other state in production of the peach. The total production varies

from 40,000,000 to 55,000,000 bushels per year.

Pear production is usually somewhere close to an average of 25,000,000 bushels. The three Pacific states, California, Washington, and Oregon, produce 15,000,000 or more bushels each year. Pear trees of producing age totaled 16,694,775 in 1935, and another 2,741,362 trees were non-producing. The three Pacific states were credited with having 8,377,083 bearing trees and 1,338,323 non-bearing trees. In the East, New York and Pennsylvania are the leaders, while in the Middle West, Michigan, Illinois, and Ohio are the ranking states from the standpoint of trees and production.

Plums and prunes are a considerable item in our domestic fruit supply. In 1935 there were 25,296,579 bearing trees reported by the census, and another 3,097,780 non-bearing trees. The crop in 1934 was reported in terms of bushels and totaled 23,296,000 bushels, and the Pacific states were reported as having produced 20,872,373 bushels, or nearly 90 per cent of the total.

Statistics for other fruits are equally as interesting. Fruit growers need statistical census information relative to agricultural production. Such information is of basic importance in intelligently conducting the business of fruit growing. The Census Bureau at Washington has compiled statistics on practically all of the fruit crops grown in America, and makes such information available to all those interested in it.

The above statistical discussion of some of our leading fruit crops indicates the role of the western states in fruit growing, and indicates the desirability of making the A.P.S. tour this summer in order to see and study at first hand the vast fruit industry of the West.

CONTINUE N.A.I. CAMPAIGN

"Everything is in bloom from roots to tops of trees," exclaimed G. Leslie Smith, president of the Illinois State Horticultural Society, in describing fruit prospects in his State before the third annual meeting of the National Apple Institute held in Columbus, Ohio, May 18.

Other reports from prominent fruit producing sections of the nation indicated that special effort will be needed to move what promises to be a "bumper" crop.

Elected as president of the National Apple Institute for the coming year was Dr. J. H. Gourley, chief in horticulture at the Ohio Agricultural Experiment Station and Ohio State University and associate editor of *AMERICAN FRUIT GROWER*. His aides in the direction of this nation-wide advertising and promotion enterprise will be John H. Lyman, prominent New England fruit grower, as vice-president; Dr. H. E. Barnard, research director of the Farm Cheimurgic Council, as secretary; and W. B. Baughman, Ohio grower whose individual advertising enterprises have gained him much attention, as treasurer.

This slate of officers resulted from deliberations of nominating committeemen including G. Leslie Smith, Illinois; George W. Kinkead, Kansas; C. Purcell McCue, Virginia; and Frank H. Beach, Ohio extension pomologist. New directors named at the Columbus meeting include prominent workers in the regional apple institutes throughout the country.

The ever-present question of fund raising

provoked long discussions. H. D. Simpson, last year's treasurer of the institute and well-known Vincennes, Ind., fruit grower, moved that Prof. B. S. Pickett be appointed to solicit funds during a two months' period this summer. The motion was unanimously adopted.

Still to be decided was the method for collection of the funds. Discussion was capped by an accepted motion of Patterson Bain, manager of the Riverview Orchards, McBain, Mo., stating that, "The National Apple Institute adopt the budget of \$7200 to be secured by request of one-tenth cent per bushel from growers contributing to local apple institutes, and one-tenth cent from growers not contributing to apple institutes, by contributions from allied industries and from state horticultural societies, it being understood that sums collected in excess of the budget be allocated to research and that specific sums be accepted if offered for research projects."

Growers are urged to support this vital project through their local institutes, state horticultural societies, or as individual producers. Questions relative to the National Apple Institute and its activities may be addressed to the institute at 224 Wimmer Building, Indianapolis, Ind.

H. L. Landy
SECRETARY

The American Pomological Society is pleased to announce that its Nomenclature Committee is co-operating with the Standardized Plant Names Committee on the revision of this important plant name guide. The chairman of the committee, Dr. M. J. Dorsey, of Urbana, Ill., will welcome ideas on the most effective ways to present desirable lists of fruits, and on the principles which should prevail in naming new varieties.

CONVERTING COMMON STORAGES

"... Consistently heavier hauls and the need for increased speed resulted in a decision of the Board of Directors of Northeast Fishing Fleet, Inc., to equip 10 of their four-masted schooners with Diesel motors. This new equipment will allow the boats to maintain a steady speed of seven knots per hour with full cargo." —*New York Chronicle-Herald, September, 1934.*

"... Along with the construction of new cold storages is the increasing number of common storages being converted into cold storage units by the installation of mechanical refrigerating units and better types of insulation. In many instances remodeling and installation of some of the latest types of cooling equipment have given the grower a modernized cold storage plant of his own for a comparatively small investment." —*American Fruit Grower, July, 1936.*

JUST as ships of New England fishing fleets were converted to power boats when needed, hundreds of fruit growers, finding that common storages, dependent upon outside temperatures for cooling, will not maintain stored fruit satisfactorily under many harvest-time conditions, are rapidly converting their common storages into cold storage facilities.

Contrary to popular belief, the trend toward conversion of common storages to the cold storage types is not centered in the southern states. It is interesting to note that four of the five cold storages now in operation in Maryland were formerly common storages. Four out of 28 grower-owned cold storages in Massachusetts were converted from the common types. W. R. Martin, Jr., secretary of the Missouri State Horticultural Society, reports that many Missouri growers have found common storages impractical for fall varieties. Another report, from Vermont, carries news that a number of growers in that section are planning to convert their storages. Many Illinois growers who built common storage plants some years ago are now contemplating the conversion of these units. There

(Continued on page 20)

Conveyors aid orderly stacking of boxed fruit in Musselman Cold Storage at Gardners, Pa.



GROWTH OF CO-OPERATIVE STORAGES

FROM California's Monterey Bay to the Rocky Coast of New England, co-operative fruit cold storages are serving growers whose combined efforts have made them possible.

Largest of the co-operative ventures is the grower-owned and controlled Winchester, Va., cold storage, with a capacity of 1,400,000 bushels. Watsonville, Calif., near Monterey Bay, boasts two co-operative cold storages. In the same community are five individual grower-owned units and two commercial plants.

Out of every fruit-producing section come rumors of more construction, planning and embryo discussions of co-operative fruit storages. Vermont growers are making plans. There is a movement in Kentucky to build a large co-operative storage. The trend in Oregon is toward centrally located cold storages operated by co-operatives. Location of a northeastern Ohio co-operative cold storage has been selected. Thus are reported activities of growers whose fruit farm locations permit them to join their neighbors in the storage of their fruit.

Most striking example of co-operative cold storage activity is that of the northeastern Ohio group. Joining forces in a concentrated effort during the past winter, growers in Columbiana and Mahoning counties held several meetings to discuss plans.

Before definite plans could be presented to potential members considerable pioneer work had to be done. For more than a year leading fruit growers of the section visited cold storages throughout the State. From their observations were formed specific plans for the proposed cold stor-

(Continued on page 20)

Showed below is recently converted cold storage at Ohio Orchards Co., Milford Center.





"FORD'S FOUND ANOTHER WAY TO CUT FARM HAULING COSTS"

HENRY FORD was born and raised on a farm. He has always been deeply interested in the farmer's problems. Years ago, when he built his first low-priced truck, his knowledge of farm needs dictated many features of its design.

This first Ford truck brought about a complete change in farm hauling. It enabled the farmer to reach far-away markets quickly and at low cost. Today, Henry Ford has found another way to cut farm hauling costs. Instead of building just one engine size and expecting it to do ALL types of farm hauling economically, Ford offers a choice of two V-8s. Every

type in the Ford V-8 Truck and Commercial Car line is available with the improved 85-horsepower engine. In addition, those types used mostly for light hauling are available with the thrifty new 60-horsepower V-8.

Your Ford dealer invites you to make an "on-the-job" test under your own operating conditions. See him today, and find out how a Ford V-8 Truck or Commercial Car can cut hauling costs on your farm.

• Convenient, economical terms through the Authorized Ford Finance Plans of the Universal Credit Company.... Also Special Farmer Credit Service



FORD V-8 TRUCKS AND COMMERCIAL CARS

AMERICAN FRUIT GROWER

COMMON STORAGES

(Continued from page 19)

are a few common storages being built throughout the country, most of which, however, will some day be converted into cold storages.

Back of this decided trend is the fact that efficient refrigeration machinery has been brought within the reach of growers with smaller acreages by engineers who have designed equipment that is easily installed and operated.

Associated with the improvements in refrigeration machinery are the advancements made in insulation material. In converting the common into a cold storage a change in insulation may be necessary before the storage can be operated successfully. Water-proofed insulation of sufficient minimum conduction value is now generally available.

Growers who plan to convert their common storages are urged to consult competent refrigeration engineers who will gladly offer advice as to the proper insulation and machinery to be used.

From the experiences of several growers who have changed their common storage plants into modern refrigerated buildings comes assurance that this practice is well worth the expense involved. Fruit grower William Zech of Baroda, Mich., says that he was able to pay for his refrigeration equipment in one year by obtaining an added revenue from his fruit over what he would have received had the fruit been kept in common storage.

CO-OPERATIVE STORAGES

(Continued from page 19)

age plant and packing shed. These were then presented at the meetings. So, from the ideas of a few fruit growers, there will soon be constructed a cold storage plant of approximately 50,000-bushel capacity.

The site for this co-operative storage has now been selected and contracts for the building and refrigeration equipment will soon be let. Organization of the group has been along the lines of co-operative law with each member having one vote in the negotiations of the co-operative.

Similar to the co-operative storage is the "custom" unit, enjoying its greatest popularity in the New England region. Massachusetts, alone, has nine of these storages. Such a plant is operated by a commercial concern, stock of which is often owned by growers who use the storage facilities. These plants are located at country points, near orchards, so that transportation costs are cut to the minimum.

Also available for grower use are the terminal cold storages. Such plants are located in large markets.

FARM COLD STORAGE

(Continued from page 10)

the inside to the outside. Less daily average operation of the refrigerating equipment may therefore be expected from a building completely exposed. Since no gain can be shown for underground or against-ground construction, there is, as Mr. Brandt points out, no object in adding to the cost of the installation by excavation work and the consequent need for waterproofing of those walls which are erected against the earth.

No matter what type of building is used, it must be well insulated to make a satisfactory storage. Specifications of a good insulation are a high thermal resistance; water, vapor, vermin and rodent-proof; odorless; and ease of application. There is a variety of insulating materials which meet the foregoing requirements when used in a properly constructed building. The right type for a given structure should be specified by an insulation expert and a grower can avoid making a costly mistake by seeking competent advice.

In approaching the matter of a cooling system for a mechanically refrigerated storage, the grower will find there is a choice of two types, coil or blower. The coil type depends upon natural air circulation to cool the fruit. The systems using blowers or diffusers create their own air circulation for cooling purposes. Here again the grower will do well to consult a refrigeration engineer who can make recommendations after considering the storage problems involved and the type or arrangement of the building.

Guinness in discussing the management of a cold storage plant states that it is first necessary to decide on the temperature at which apples are to be stored. Most commercial cold storage plants, he points out, consider 32 degrees as the standard storage temperature. Many commercial varieties, he believes, can be stored successfully at the low temperature, although certain varieties are subject to internal breakdown when kept at low temperatures. In general, he finds, low temperatures retard the ripening process and are considered desirable if apples are to be held long. He further suggests that if apples are to be held for the latest possible market, it is advisable to design the plant for 32-degree operation, as obviously the owner can operate at a higher temperature if he finds this advisable. He points out that equipment which will cool the fruit to 45 degrees during loading will normally reduce the temperature to 32 degrees in a week after the loading has been completed.

(To be continued in July)

JUNE, 1937

Ask for a DEMONSTRATION OF THE NEW MONEY SAVING U.S. FARM TIRE

FARMERS SAY IT-

- ★ SAVES 25% FUEL
- ★ SAVES 25% TIME
- ★ CUTS REPAIRS 39%

NOBBY GRIP

Gives this EXTRA PULLING POWER



DEEP, RUGGED NOBS...MASSIVE SHOULDER BUTTRESSES...Take hold...grip the ground...gear to the side of the furrow...pull your biggest plow through the heaviest going.



ALL-DIRECTION TRACTION...Only Nobby design gives a perfect combination of positive forward and reverse traction...and sidewise grip.



AUTOMATIC SELF CLEANING...1. As the Nobs bite in, pressure is removed, the tire snaps back to normal shape...cleanly ejecting the dirt.



FLEXIBLE DESIGN...the wide flexible tread area flattens out under pressure...the staggered Nobs grip the irregularities of the rough ground...and give maximum pulling power, even on wet grass.



LONG LIFE...New U.S. "rot-proofing" treatment gives extra resistance to deterioration, action to the de-moisture and air. Famous U. S. Tempered Rubber tread wears longer...Safety-bonded cord body has longer flexing life.

United States Rubber Company
U. S. TIRE DEALERS MUTUAL CORPORATION





Better Foliage - Better Fruit - with "BLACK LEAF 40"

YOU WILL PICK BETTER FRUIT if 30 to 50 healthy leaves support each apple. Don't let leaf-hoppers and aphids destroy them. Use "Black Leaf 40" to control these insects. They feed on your crop, and the leaves which support it. Leaf injury reduces yield and quality, and cuts down bud set.

"BLACK LEAF 40", by its powerful contact action, and by fumes, kills codling moth eggs, worms, and adults, also leaf-hoppers and aphids. Use "Black Leaf 40" in combination with summer-oil or other standard spray materials, as recommended by your Experiment Station.

"BLACK LEAF 40" is neither caustic nor toxic to foliage or fruit, and retains no harmful residues. Use "Black Leaf 40" to avoid injury to the leaves and fruit. Use "Black Leaf 40" to avoid the costs and losses of washing early apples, or tender varieties. "Black Leaf 40" is concentrated, effective, easy to mix and to apply. Sold by spray material dealers everywhere.

The size of apples is proportional to the number of leaves that support them as shown at left. Courtesy, Dr. A. E. Murneek, Mo. Agr. Exp. Sta.

50

TOBACCO BY-PRODUCTS & CHEMICAL CORPORATION, INCORPORATED
LOUISVILLE ★ KENTUCKY

BUYER'S GUIDE for the FRUIT FARM

CLASSIFIED INDEX

Agitators	25	Guns—Spray	25	Rotenone Dusts	24
Agricultural Lime	46	Gypsum	46	Rotenone Products	32
Ammonium Phosphate	46	Harrows	34	Rubber Hose	38
Ammonium Sulphate	46	Healing Compounds—Tree	25	Rubber Sheetings—Sponge	42
Antiseptics	28	Hose—Electric	33	Rubber Stamps	41
Augers—Post Hole	46	Hose Fittings	26, 38	Saw Mills	42
Bags	40	Hose—Irrigation	38	Scrapers—Bark	23
Bags—Picking	39	Hose—Spray	26	Shears	44
Bands—Tree	25	Humidifiers	33	Shredded Paper	41
Bark Scrapers	25	Hydraulic Rams	38	Silicates	28, 32
Basic Copper Sulphate Dusts	24	Hydrometers	39	Sizers	42
Basket Facers	42	Inks—Stamping	41	Soaps	32
Basket Turners	42	Insect Control	24-32	Sodium Benzoate	45
Baskets	40	Insect Electrocutors	25	Sodium Nitrate	46
Baskets—Picking	39	Insulation	33	Soil Testing Outfits	39
Bearings	27	Irrigation	38	Soluble Sulphur	32
Berry Boxes	40	Irrigation Pumps	38	Sorting Tables—Fruit	42
Beta Naphthol	25	Knives	44	Sponge Rubber Sheetings	42
Bhwests	33	Labels	41	Spray Accessories	25
Bolts	26	Ladders	39	Spray Clothing	26
Bordeaux Mixture	28	Lanterns—Grafting	44	Spray Guns	25
Box Shooks	40	Lead Arsenate	28	Spray Hose	26
Bones	40	Lime	28, 46	Spray Hose Fittings	26
Brooms—Spray	25	Liners	41	Spray Pumps	27
Budding Strips	44	Liquid Lime Sulphur	32	Sprayer Equipment	27
Building Papers	33	Magnesium Arsenate	28	Sprayers	27
Burners—Weed	25	Manganese Arsenate	28	Spraying Materials	28-32
Calcium	28, 46	Manganese Sulphate	46	Spreaders	32
Caps—Corrugated	40	Marketing Agencies	45	Sprinklers—Overhead	38
Canners—Fruit	42	Melting Pots	44	Stamping Inks	41
Carts—Strainer	25	Miscible Oils	30	Stamps—Rubber	41
Commercial Mixed Fertilizers	46	Mixed Fertilizers—Commercial	46	Staplers	42
Commission Merchants	45	Misers—Dust	24	Stationary Spray Systems	27
Containers	40	Mono-hydrated Copper Sulphate Dusts	24	Stickers	32
Continuous Tread Tractors	37	Mowers	36	Storage	33, 34
Conveyors	42	Nicotine Dusts	24	Strainers	26
Coupler Compounds	28	Nicotine Sulphate	30	Sulphates	28, 30, 49
Dates	40	Nitrates	46	Sulphur Dusts	24
Dates—Picking	39	Nozzles	26	Sulphur	32, 46
Cultivators	34	Nursery Stock	39	Superphosphate	46
Cylons	41	Oils—Spray	30	Swivels	26
Birds Control	24-32	Oghard Instruments	39	Tank Fillers	27
Bins—Storage	33	Orchard Sanitation	25	Tanks	27
Drainage	38	Overhead Sprinklers	38	Tape—Grafting	44
Dry Lime Sulphur	32	Packages	40, 41	Tar Emulsions	30
Dusts—Air	33	Packaging Materials	40, 41	Tetraethyl Acetate	25
Dusters	24	Packing Forms	42	Testers—Fruit Pressure	39
Dusting Equipment	24	Packing House Equipment	42	Thermometers	39
Dusting Materials	24	Paper—Shredded	41	Thermostats	34
Dust Mixers	24	Paradichlorobenzene	25	Tile—Building	34
Electrocutors—Insect	25	Paris Green	28	Tillage Equipment	14-37
Emulsions	30	Phosphates	46	Tires—Pneumatic	27
Engines	27	Pikering Equipment	39	Tractors	37
Ethylene	42	Pink Sulphur	32	Trailers—Sprayer	27
Explosives	35, 38	Piping	38	Tree Bands	25
Exporters—Fruit	45	Plows—Disc	36	Tree Healing Compounds	21
Exhill Hose	38	Plows—Moldboard	36	Tree Moving Equipment	37
Fakers—Basket	42	Polishers—Fruit	42	Tree Protectors	24
Fans	33	Parous Hose	38	Trellises	46
Fanning Equipment	46	Posts	46	Turners—Basket	42
Fertilizer Distributors	35	Potash Salts	46	Urea	46
Fertilizers	46	Potassium Nitrate	46	Valves	26, 38
Field Crates	39	Pressure Gauges	26	Ventilators	34
Filters—Tank	27	Printed Bags—Transparent	41	Washers—Fruit	42
Fittings—Hose	26, 38	Printed Sheets—Transparent	41	Washing Compounds—Fruit	42
Fluorine Compounds	28	Protectors—Tree	25	Waterproofing Compounds	34
Fluorine Dusts	24	Prunes	44	Was—Grafting	44
Fly Papers	42	Pruning Equipment	44	Wood Burning	25
Fly Ribbons	42	Pumps	47, 50	Weld Hoses	37
Fly Sprays	42	Pyrethrum and Derivatives	32	Wettable Sulphur	32
Flinges	41	Pyrethrum Dusts	24	Wheel Tractors	37
Fruit Exporters	43	Rams—Hydraulic	38	Wheels	27
Fruit Presses	45	Refrigeration Machinery	33	Windmills	28
Fruit Pressure Testers	39	Repellents—Rodent	25	Wire	46
Fruit Processing	45	Respirators	26	Wound Dressings	44
Garden Tractors	37	Rueening Outfits—Ethylene	42	Wrappers	41
Gates	46	Rodent Repellents	25	Zinc Arsenite	28
Ghicks—Rubber	26	Rods—Spray	26	Zinc Sulphate	32
Ghutin	25	Roofing	34		
Goggles	26				
Graders	42				
Grafting Equipment	44				

INSECT AND DISEASE CONTROL

DUSTING EQUIPMENT

Dusters

HAND

John Bean Mfg. Co., Lansing, Mich.
Binks Mfg. Co., Chicago, Ill.
E. C. Brown Co., Rochester, N.Y.
A. B. Farquhar Co., Ltd., York, Pa.
Feeny Mfg. Co., Muncie, Ind.
H. D. Hudson Mfg. Co., Chicago, Ill.
Messinger Mfg. Co., Tatamy, Pa.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Nico-Dust Mfg. Co., Los Angeles, Calif.
Oakes Mfg. Co., Tipton, Ind.
Peerless Dust Gun Co., Cleveland, Ohio
Root Mfg. Co., Cleveland, Ohio
D. B. Smith & Co., Utica, N.Y.

POWER

American Cyanamid & Chemical Corp., Insecticide Dept., New York, N.Y.
John Bacon, Inc., Gasport, N.Y.
John Bean Mfg. Co., Lansing, Mich.
A. B. Farquhar Co., Ltd., York, Pa.
Friend Mfg. Co., Gasport, N.Y.
Messinger Mfg. Co., Tatamy, Pa.
Niagara-Sprayer & Chemical Co., Inc., Middleport, N.Y.
Root Mfg. Co., Cleveland, Ohio
Shunk Mfg. Co., Bucyrus, Ohio
Edwin C. Tyson, Flora Dale, Pa.

Mixers, Dust

Friend Mfg. Co., Gasport, N.Y.
Peerless Dust Gun Co., Cleveland, Ohio
Root Mfg. Co., Cleveland, Ohio

DUST WITH AN AIRFLOW PEERLESS DUST GUN



Model 36

Greatly increased power with ease of operation.
Puts the dust where you want it—on top or underneath.

Peerless Dust Gun Co.
5100 St. Clair Ave., Cleveland, Ohio

Reduce Dusting Costs—Do the Job Easier and Quicker with

ROOT ORCHARD DUSTERS

Better, more thorough dusting means a bigger, more valuable crop. The unusually high air velocity of Root Orchard Dusters gives you better dusting results at a saving of time and labor. Easily regulated for light or heavy applications. Being portable, they may be mounted on any truck or conveyance.

Send for catalog of complete Root line for Orchard and Crop Dusting.

THE ROOT MANUFACTURING CO. 1011-51 Power Avenue, CLEVELAND, OHIO

"MAGNETIC SPRAY" WETTABLE SULPHUR • "MAGNETIC" CATALYTIC SULPHUR • "ELECTRIC" SUPER-ADHESIVE DUSTING SULPHUR

"Magnetic Spray" Wettable Sulphur. The purest, effective wettable sulphur obtainable. It's the sulphur in the spray that does the work, 98.5% pure active sulphur.

"Electric" Super-Adhesive Dusting Sulphur, 99.8% pure and free from fillers. It is especially processed to give it unusual adhesive properties and its fine particle size insures maximum coverage and effective kill.

"Magnetic" Catalytic Sulphur. A safener for Lime Sulphur-Lead Arsenate spray combinations. Effectively retards the formation of injurious soluble arsenical compounds and black lead sulphide sludge which form when these two are combined.

STAUFFER CHEMICAL COMPANY

FREEPORT, TEXAS

420 LEXINGTON AVENUE NEW YORK

CHICAGO, ILL.

AMERICAN FRUIT GROWER

DUSTING MATERIALS

Basic Copper Sulphate Dusts

Sherwin-Williams Co., Cleveland, Ohio

Fluorine Dusts

E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.

Monohydrated Copper Sulphate Dusts

Ansbacher-Siegle Corp., Brooklyn, N.Y.
Bowker Chemical Co., New York, N.Y.
Central Chemical Co., Inc., Baltimore, Md.
Chipman Chemical Co., Bound Brook, N.J.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
General Chemical Co., New York, N.Y.
John Lucas Co., Philadelphia, Pa.
McCormick & Co., Inc., Baltimore, Md.
Mechling Bros. Chemical Co., Camden, N.J.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Nichols Copper Co., New York, N.Y.
Sherwin-Williams Co., Cleveland, Ohio

Nicotine Dusts

Ansbacher-Siegle Corp., Brooklyn, N.Y.
Bowker Chemical Co., New York, N.Y.
Central Chemical Co., Inc., Baltimore, Md.
Chipman Chemical Co., Inc., Bound Brook, N.J.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.
General Chemical Co., New York, N.Y.
Interstate Chem. Mfg. Co., Jersey City, N.J.
John Lucas Co., Philadelphia, Pa.
McCormick & Co., Inc., Baltimore, Md.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Nicotine Production Corp., Clarksville, Tenn.
Tri-Tox Chemical Co., Washington, Ind.

"ELECTRIC"

Super-Adhesive Dusting Sulphur

99.8% PURE
"Electric" is especially processed, extremely fine and economical to use. Insist on "Electric" from your dealer.

STAUFFER CHEMICAL CO.
CHICAGO—420 LEX. AVE., N.Y.C.—FREEPORT, TEX.

Pyrethrum Dusts

Ansbacher-Siegle Corp., Brooklyn, N.Y.
Chipman Chemical Co., Inc., Bound Brook, N.J.
General Chemical Co., New York, N.Y.
Kalo Co., Quincy, Ill.
Kay-Fries Chemicals, Inc., New York, N.Y.
McCormick & Co., Inc., Baltimore, Md.
Mechling Bros. Chemical Co., Camden, N.J.
B. G. Pratt Co., New York, N.Y.
Stauffer Chemical Co., New York, N.Y.

"MAGNETIC" DOUBLE-DUTY DUSTS

"Magnetic" Botenone-Sulphur Dust
"Magnetic" Pyrethrum-Sulphur Dust
Combination insecticides and fungicides.

STAUFFER CHEMICAL CO.

CHICAGO—420 LEX. AVE., N.Y.C.—FREEPORT, TEX.

Rotenone Dusts

Ansbacher-Siegle Corp., Brooklyn, N.Y.
Bowker Chemical Co., New York, N.Y.
Central Chemical Co., Inc., Baltimore, Md.
Chipman Chemical Co., Inc., Bound Brook, N.J.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.
General Chemical Co., New York, N.Y.
John Lucas Co., Philadelphia, Pa.
McCormick & Co., Inc., Baltimore, Md.
Mechling Bros. Chemical Co., Camden, N.J.
National Sulphur Co., Inc., New York, N.Y.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Rotenone Products Co., East Orange, N.J.
Sherwin-Williams Co., Cleveland, Ohio
Stauffer Chemical Co., New York, N.Y.

Sulphur Dusts

Ansbacher-Siegle Corp., Brooklyn, N.Y.
Battelle & Renwick, New York, N.Y.
Bowker Chemical Co., New York, N.Y.
Central Chemical Co., Inc., Baltimore, Md.
Chipman Chemical Co., Inc., Bound Brook, N.J.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.
General Chemical Co., New York, N.Y.
John Lucas Co., Philadelphia, Pa.
McCormick & Co., Inc., Baltimore, Md.
Mechling Bros. Chemical Co., Camden, N.J.
Merrimac Chemical Co., Everett, Mass.
Micronizer Processing Co., Inc., Moorestown, N.J.
National Sulphur Co., Inc., New York, N.Y.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Sherwin-Williams Co., Cleveland, Ohio
Stauffer Chemical Co., New York, N.Y.
White Tar Co. of N.J., Inc., Kearny, N.J.

INSECT AND DISEASE CONTROL

ORCHARD SANITATION Bands, Tree

John Bacon, Inc., Gasport, N.Y.
Bemis Bag Co., St. Louis, Mo.
Fruit & Produce Packing, Inc., Indianapolis,
Ind.
Hinde & Dauch Paper Co., Sandusky, Ohio
Edwin H. House, Saugatuck, Mich.
M. A. Koeller, Barry, Ill.
J. A. McCarty, Evansville, Ind.
Owens-Illinois Glass Co., Toledo, Ohio
Tanglefoot Co., Grand Rapids, Mich.
Edwin C. Tyson, Flora Dale, Pa.

Beta Naphthol

American Cyanamid & Chemical Corp., Insecticide Dept., New York, N.Y.
Sherwin-Williams Co., Cleveland, Ohio

Glutrin

Robeson Process Co., New York, N.Y.

Insect Electrocutors

Folmer Electracide Corp., Rochester, N.Y.
Insect Electrocutor Co., Cincinnati, Ohio
International Sales Co., Chicago, Ill.
Mortene Laboratories, Chicago, Ill.

For Control of the Codling Moth and The Key to Orchard Profits

The "ENTOSTAT"

(Electric Insect Killer)
Offers you these five features:

- Efficiency • Durability
- Economy • Compactness
- Weatherproof

Full Marketable Harvests

Result from
ENTOSTAT EQUIPMENT

\$14.50 F.O.B.
Chicago

At Your Implement Dealers
or Write Us Direct

INTERNATIONAL SALES CO.
1110 Howe Street, CHICAGO, ILL.



Paradichlorobenzine

Central Chemical Co., Inc., Baltimore, Md.
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
General Chemical Co., New York, N.Y.
Hooker Electro Chemical Co., New York, N.Y.
Mallinckrodt Chem. Wks., St. Louis, Mo.
Mechling Bros. Chemical Co., Camden, N.J.
Monsanto Chemical Co., St. Louis, Mo.
Niagara Alkali Co., New York, N.Y.
Solvay Sales Corp., New York, N.Y.

Rodent Repellents

Castle Chemical Co., Castle Rock, Minn.
Clarion Development Co., Inc., Clarion, Pa.
J. Livingstone, Jr., Milwaukee, Wis.
Rollin H. Tabor, Mt. Vernon, Ohio
Tanglefoot Co., Grand Rapids, Mich.

Scrapers, Bark

Bartlett Mfg. Co., Detroit, Mich.
Fruit Packing Equipment Co., Swoope, Va.
Parma Water Lifter Co., Parma, Idaho
Carroll R. Tiffany, Conklin, N.Y.
Edwin C. Tyson, Flora Dale, Pa.

Terpinyl Acetate

Eastman Kodak Stores, Washington, D.C.
Eimer & Amend, New York, N.Y.
vanAmergen Haebler, Inc., New York, N.Y.

Tree Healing Compounds

Clarion Development Co., Inc., Clarion, Pa.

Tree Protectors

Brown Fence & Wire Co., Cleveland, Ohio
Chase Bag Co., Cleveland, Ohio
Kitselman Bros., Muncie, Ind.

Weed Burners

Aeroil Burner Co., Inc., West New York, N.J.

E. C. Brown Co., Rochester, N.Y.
Hauck Mfg. Co., Brooklyn, N.Y.

FLAME-GUN DESTROYS WEEDS

Does Work of 4 Men

Hauck Kerosene Flame-Gun—2000°F. controlled heat—quickly...easily...economically destroys weeds (seeds and all), brush, other objectionable growths. Keeps roadways, fences, irrigation ditches, orchards, etc., clean. Hundred and one uses. Inexpensive—Safe—Easy to use. Pays for itself in time and money saved. 10 day Free Trial. Write for Free literature and special introductory price.



HAUCK MFG. CO.
163 TENTH STREET
BROOKLYN, N.Y.

FREE VALUABLE FOLDER—WRITE TODAY!

KILLS PEACH TREE BORER!

Para-dichlorobenzene is strongly recommended by the U. S. Dept. of Agriculture and leading fruit growers as the most effective method yet found for controlling the peach tree borer. It is a proven killer that destroys the borer's larvae without harm to the tree. Write immediately for full information on

SOLVAY
TRADE MARK REG. U. S. PAT. OFF.
PARA-DICHLOROBENZENE
SOLVAY SALES CORPORATION
Alkalies and Chemical Products Manufactured by
The Solvay Process Company
40 Rector Street New York

SPRAYING EQUIPMENT

Spray Accessories

AGITATORS

John Bean Mfg. Co., Lansing, Mich.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio

BROOMS

John Bean Mfg. Co., Lansing, Mich.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio

CLOTHS, STRAINER

John Bean Mfg. Co., Lansing, Mich.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.

Kill Weeds with Fire!

Free

48 Page Booklet No. 990 gives valuable information on solving 90 Farm Problems. Write West New York, N.J.

GUNS

John Bacon Inc., Gasport, N.Y.
John Bean Mfg. Co., Lansing, Mich.
Binks Mfg. Co., Chicago, Ill.
Campbell & Budlong Machine Works, San Jose, Calif.
Cushman Bros., Palo Alto, Calif.
Eureka Mower Co., Utica, N.Y.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
W. L. Hamilton & Co., Bangor, Mich.
Hardie Mfg. Co., Hudson, Mich.
H. D. Hudson Mfg. Co., Chicago, Ill.
F. E. Myers & Bro. Co., Ashland, Ohio
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
William Stahl Sprayer Co., Quincy, Ill.
Edwin C. Tyson, Flora Dale, Pa.

Now that the crop is on its way, let Hamilton guns save the day Will Hamilton

Spray Guns with Controlled Streamline

W. L. HAMILTON & CO.
BANGOR - MICHIGAN

Six Models - A gun for every purpose

"MAGNETIC" ROTENONE-SULPHUR DUST • "MAGNETIC" PYRETHRUM-SULPHUR DUST • "MAGNETIC" CRYOLITE-SULPHUR SPRAY

"Magnetic" Rotenone-Sulphur Dust. A labor saving combination for controlling beetles, worms, aphids, red spider, and those plant diseases controlled by sulphur, in one dusting.

"Magnetic" Pyrethrum-Sulphur Dust. Pyrethrum is especially effective against leaf hopper, leaf roller, tarnish plant bug, flea hopper, weevil, etc., while the sulphur controls most fungous growths.

"Magnetic" Cryolite-Sulphur is available either as a spray or dust. A powerful synthetic cryolite has been blended with our highest quality sulphur to make a compound for controlling chewing insects and fungi in one application.

STAUFFER CHEMICAL COMPANY

FREEPORT, TEXAS

420 Lexington Avenue NEW YORK

CHICAGO, ILL.

AMERICAN FRUIT GROWER

JUNE, 1937

PAGE 25

INSECT AND DISEASE CONTROL

HOSE

John Bacon, Inc., Gasport, N.Y.
 John Bean Mfg. Co., Lansing, Mich.
 Campbell & Budlong Machine Works, San Jose, Calif.
 Campbell-Hausfeld Co., Harrison, Ohio
 Cincinnati Rubber Mfg. Co., Cincinnati, Ohio
 Continental Rubber Works, Erie, Pa.
 Deming Co., Salem, Ohio
 Electric Hose & Rubber Co., Wilmington, Del.
 A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 Goodall Rubber Co., Philadelphia, Pa.
 B. F. Goodrich Co., Akron, Ohio
 Goodyear Tire & Rubber Co., Akron, Ohio
 Hardie Mfg. Co., Hudson, Mich.
 Manhattan Rubber Mfg. Co., Passaic, N.J.
 Mercer Rubber Co., Hamilton Square, N.J.
 Minor Rubber Co., Inc., Newark, N.J.
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
 Republic Rubber Co., Youngstown, Ohio
 B. C. Tillinghast Rubber Co., Philadelphia, Pa.
 Edwin C. Tyson, Flora Dale, Pa.
 U. S. Rubber Products, Inc., New York, N.Y.

NOZZLES

John Bean Mfg. Co., Lansing, Mich.
 E. C. Brown Co., Rochester, N.Y.
 Champion Corp., Hammond, Ind.
 Deming Co., Salem, Ohio
 A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 W. L. Hamilton & Co., Bangor, Mich.
 Hardie Mfg. Co., Hudson, Mich.
 H. D. Hudson Mfg. Co., Chicago, Ill.
 F. E. Myers & Bro. Co., Ashland, Ohio
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
 Oakes Mfg. Co., Inc., Tipton, Ind.
 D. B. Smith & Co., Utica, N.Y.
 Sprayer Supply Mfg. Co., Grand Rapids, Mich.
 William Stahl Sprayer Co., Quincy, Ill.
 Edwin C. Tyson, Flora Dale, Pa.

PRESSURE GAUGES

John Bean Mfg. Co., Lansing, Mich.
 A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 W. L. Hamilton & Co., Bangor, Mich.
 Hardie Mfg. Co., Hudson, Mich.
 F. E. Myers & Bro. Co., Ashland, Ohio
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.

RODS

John Bean Mfg. Co., Lansing, Mich.
 Deming Co., Salem, Ohio
 Eureka Mower Co., Utica, N.Y.
 A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 W. L. Hamilton & Co., Bangor, Mich.
 Hardie Mfg. Co., Hudson, Mich.
 Messmer Brass Co., St. Louis, Mo.
 F. E. Myers & Bro. Co., Ashland, Ohio
 D. B. Smith & Co., Utica, N.Y.
 William Stahl Sprayer Co., Quincy, Ill.
 Edwin C. Tyson, Flora Dale, Pa.

STRAINERS

John Bean Mfg. Co., Lansing, Mich.
 Campbell & Budlong Machine Works, San Jose, Calif.
 Campbell-Hausfeld Co., Harrison, Ohio
 A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 Hardie Mfg. Co., Hudson, Mich.
 F. E. Myers & Bro. Co., Ashland, Ohio

SWIVELS

John Bean Mfg. Co., Lansing, Mich.
 A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 W. L. Hamilton & Co., Bangor, Mich.
 Hardie Mfg. Co., Hudson, Mich.
 C. B. Hunt & Son, Salem, Ohio
 F. E. Myers & Bro. Co., Ashland, Ohio

VALVES

John Bean Mfg. Co., Lansing, Mich.
 Central Brass Co., Cleveland, Ohio
 Crane Co., Chicago, Ill.
 A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 W. L. Hamilton & Co., Bangor, Mich.
 Hardie Mfg. Co., Hudson, Mich.
 F. E. Myers & Bro. Co., Ashland, Ohio

EVERYTHING FOR THE ORCHARD Wholesale and Retail

SPRAYERS, DUSTERS and MATERIALS
 Power, Barrel, Hand and Knapsack Sprayers. Full line of Spray Materials and Dust Mixtures. Hand and Power Orchard and Crop Dusters. Sprayer Accessories. Gums, Root, Nitrogen and Hormone. Weed Killers, Woods, Preservatives, Bluestone, etc. Thermometers, Hydrometers, Hygrometers, and Magnifiers.

EDWIN C. TYSON, Flora Dale, Pa., U.S.A.

See Ads. Pages 39, 41, 44

Spray Hose Fittings

John Bacon Inc., Gasport, N.Y.
 John Bean Mfg. Co., Lansing, Mich.
 Campbell & Budlong Machine Works, San Jose, Calif.
 Campbell-Hausfeld Co., Harrison, Ohio
 Central Brass Co., Cleveland, Ohio
 Electric Hose & Rubber Co., Wilmington, Del.

A. B. Farquhar Co., Ltd., York, Pa.
 Field Force Pump Co., Elmira, N.Y.
 Friend Mfg. Co., Gasport, N.Y.
 Goodall Rubber Co., Philadelphia, Pa.
 B. F. Goodrich Co., Akron, Ohio
 Goodyear Tire & Rubber Co., Akron, Ohio
 Greenpoint Iron & Pipe Co., Inc., Brooklyn, N.Y.

W. L. Hamilton & Co., Bangor, Mich.
 Hardie Mfg. Co., Hudson, Mich.
 C. B. Hunt & Son, Salem, Ohio
 F. E. Myers & Bro. Co., Ashland, Ohio
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.

Northwest Irrigation Co., Antigo, Wis.
 Skinner Irrigation Co., Troy, Ohio
 D. B. Smith & Co., Utica, N.Y.
 William Stahl Sprayer Co., Quincy, Ill.
 B. C. Tillinghast Rubber Co., Philadelphia, Pa.

Edwin C. Tyson, Flora Dale, Pa.
 U. S. Rubber Products, Inc., New York, N.Y.

Spray Clothing

BOOTS

Continental Rubber Works, Erie, Pa.
 Hood Rubber Co., Watertown, Mass.
 Miller Rubber Co., Akron, Ohio
 Minor Rubber Co., Inc., Newark, N.J.
 Mishawaka Rubber & Woolen Mfg. Co., Mishawaka, Ind.
 U. S. Rubber Products, Inc., New York, N.Y.

GLOVES, RUBBER

Continental Rubber Works, Erie, Pa.
 Faultless Rubber Co., Ashland, Ohio
 B. F. Goodrich Co., Akron, Ohio
 Mine Safety Appliances Co., Pittsburgh, Pa.
 Seiberling Rubber Co., Akron, Ohio
 U. S. Rubber Products, Inc., New York, N.Y.

GOGGLES

American Optical Co., Southbridge, Mass.
 Chicago Eye Shield Co., Chicago, Ill.
 H. S. Cover, South Bend, Ind.
 Mine Safety Appliances Co., Pittsburgh, Pa.
 Minor Rubber Co., Inc., Newark, N.J.
 Pulmosan Safety Equipment Corp., Brooklyn, N.Y.
 Willson Products, Inc., Reading, Pa.

Don't Spray Your Eyes



Protect them from biting chemical mists and sprays with this light weight Sprayer's Goggle. You need them. Comfortable to wear—the long-life all rubber frames are soft on the face, and the curved lenses allow you to see easily in all directions. Here's something you've often felt the need for. Makes spraying a comfort on windy days. Take advantage of low price. Mail \$1.00 for a pair today. Sent postpaid. CHICAGO EYE SHIELD CO., 2300 Warren Blvd., CHICAGO, Ill. (Oldest and largest exclusive makers of Eye Protective Equipment in U.S.A.)

RESPIRATORS

Chicago Eye Shield Co., Chicago, Ill.
 B. F. Goodrich Co., Akron, Ohio
 Mine Safety Appliances Co., Pittsburgh, Pa.
 Minor Rubber Co., Inc., Newark, N.J.
 Pulmosan Safety Equipment Corp., Brooklyn, N.Y.
 Willson Products, Inc., Reading, Pa.

AMERICAN FRUIT GROWER



The ADMIRAL CAPE MAY, NEW JERSEY

A Modern Fireproof hotel of 500 rooms, located on the ocean front, offering every facility for the comfort and enjoyment of its guests. Large outside rooms, superb cuisine, cocktail lounge.

Salt Water Swimming Pool Surf Bathing

**Sun Tan Club—Cabana Colony
Golf—Tennis—Riding—Bowling
Yachting—Deep Sea Fishing
Crabbing—Sailing**

Dancing Nightly Concert Orchestra
Marine Room Special Entertainment

**Special Low Rates Throughout
The Season**

Under Personal Ownership Management of Louis Isquith

JUNE, 1937

INSECT AND DISEASE CONTROL

Spray Pumps

HAND

John Bean Mfg. Co., Lansing, Mich.
E. C. Brown Co., Rochester, N.Y.
Campbell-Hausfeld Co., Harrison, Ohio
Dening Co., Salem, Ohio
W. & B. Douglas Pump Co., Philadelphia,
Pa.

A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Goulds Pumps, Inc., Seneca Falls, N.Y.
Hardie Mfg. Co., Hudson, Mich.
H. D. Hudson Mfg. Co., Chicago, Ill.
F. E. Myers & Bro. Co., Ashland, Ohio
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Edwin C. Tyson, Flora Dale, Pa.

POWER

John Bean Mfg. Co., Lansing, Mich.
Campbell & Budlong Machine Works, San
Jose, Calif.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Edwin C. Tyson, Flora Dale, Pa.

Sprayer Equipment

BEARINGS

Hyatt Bearings Division, General Motors
Corp., Newark, N.J.
New Departure Mfg. Co., Detroit, Mich.
SKF Industries, Inc., Philadelphia, Pa.
Timken Roller Bearing Co., Canton, Ohio

ENGINES

John Bean Mfg. Co., Lansing, Mich.
J. I. Case Co., Racine, Wis.
Caterpillar Tractor Co., Peoria, Ill.
John Deere, Moline, Ill.
Dempster Mill Mfg. Co., Beatrice, Nebr.
Fairbanks, Morse & Co., Chicago, Ill.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
Hercules Motors Corp., Canton, Ohio
International Harvester Co., Chicago, Ill.
Minneapolis-Moline Power Implement Co.,
Minneapolis, Minn.
F. E. Myers & Bro. Co., Ashland, Ohio
New-Way Engine Co., Lansing, Mich.
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Oliver Farm Equipment Sales Co., Chicago,
Ill.
Palmer Bros. Engines, Inc., Cos Cob, Conn.
Stover Mfg. & Engine Co., Freeport, Ill.
Waukesha Motor Co., Waukesha, Wis.
Witte Engine Works, Kansas City, Mo.
Worthington Pump & Machinery Co., Har-
rison, N.J.

STOVER

Electric or Engine Drive
PUMPING UNITS

Take the Backache Out of Pumping

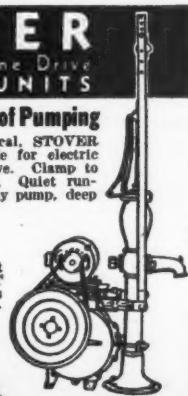
Compact, sturdy and economical, STOVER
PUMPING UNITS are made for electric
motor or gasoline engine drive. Clamp to
pump head, on old platform. Quiet run-
ning. Styles and sizes for any pump, deep
or shallow wells.

Write for Free Catalog

Send a post card for latest
STOVER PUMPING UNIT
catalog giving sizes, capacities
and suggestions for labor sav-
ing hook-ups.

STOVER MFG. & ENGINE CO.

Dept. P-53, Freeport, Ill.



TANKS AND TANK FILLERS

John Bacon, Inc., Gasport, N.Y.
John Bean Mfg. Co., Lansing, Mich.
Eureka Mower Co., Utica, N.Y.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
Kalamazoo Tank & Silo Co., Kalamazoo,
Mich.
F. E. Myers & Bro. Co., Ashland, Ohio
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.

TIRES, PNEUMATIC

Firestone Tire & Rubber Co., Akron, Ohio
B. F. Goodrich Co., Akron, Ohio
Goodyear Tire & Rubber Co., Inc., Akron,
Ohio
Kelly-Springfield Tire Co., Cumberland,
Md.
Seiberling Rubber Co., Akron, Ohio
U. S. Rubber Products, Inc., New York,
N.Y.

TRAILERS

John Bean Mfg. Co., Lansing, Mich.
Campbell & Budlong Machine Works, San
Jose, Calif.
John Deere, Moline, Ill.
Electric Wheel Co., Quincy, Ill.
Hardie Mfg. Co., Hudson, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio
Peru Wheel Co., Peru, Ill.

WHEELS

John Bean Mfg. Co., Lansing, Mich.
Campbell-Hausfeld Co., Harrison, Ohio
Electric Wheel Co., Quincy, Ill.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
French & Hecht, Inc., Davenport, Iowa
Hardie Mfg. Co., Hudson, Mich.
Motor Wheel Corp., Lansing, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio
Peru Wheel Co., Peru, Ill.

Sprayers

HAND

John Bacon, Inc., Gasport, N.Y.
John Bean Mfg. Co., Lansing, Mich.
E. C. Brown Co., Rochester, N.Y.
Campbell-Hausfeld Co., Harrison, Ohio
Champion Corp., Hammond, Ind.
Dobbins Mfg. Co., No. St. Paul, Minn.
Eureka Mower Co., Utica, N.Y.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
H. D. Hudson Mfg. Co., Chicago, Ill.
F. E. Myers & Bro. Co., Ashland, Ohio
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Oakes Mfg. Co., Inc., Tipton, Ind.
D. B. Smith & Co., Utica, N.Y.
William Stahl Sprayer Co., Quincy, Ill.
Edwin C. Tyson, Flora Dale, Pa.

HUDSON

SPRAYERS

Every orchardist needs hand operated
sprayers for those smaller jobs. The Hudson
line includes compressed air and knap-
sack types, wheeled outfits, barrel and
bucket pumps. More than 30 years' man-
ufacturing experience back of Hudson
Sprayers assures you of getting practical
design and superior performance. Write
for new catalog.

H. D. HUDSON MFG. CO.
589 E. Illinois St., Chicago

a "Friend"
Insures your
Spray profits



Your spray profits depend largely on
your spray outfit! Is it efficient? Is it
easy to handle? Is its pressure and vol-
ume right? Does it exactly fit YOUR
needs?

Before you select ANY sprayer, check
these vital points of the most amazing
Spray Pump ever built. Here's a
mechanical marvel! Check them item by item—
Only six moving parts—all aluminized—no oil
holes or grease cups—simplest of all sprayers.
Easiest Running—Timken bearings—not a crank
shaft, connecting rod, wrist pin or plunger cup
on entire pump.
Most Accessible—every part easy to get at.
Valves outside, not inside.
Easiest to Maintain—3 minutes to remove,
clean and replace a valve. 10 minutes to com-
pletely replace a cylinder. Easy, speedy.
Vibrationless—No lining used on cylinders—
no wear. No metal-to-metal contact, no scor-
ing, no friction.
Our new catalog will tell you why 14,000
FRIEND users are completely satisfied. It
will solve YOUR spray problems as well.
Sizes range from 5 to 70 gals. per minute!
From 400 to 1000 pounds pressure!

Send Now
for BIG. NEW
Sprayer
CATALOG - FREE

FRIEND MFG.
CO.
25 EAST AVE. GASPORT, N.Y.

POWER

John Bacon, Inc., Gasport, N.Y.
John Bean Mfg. Co., Lansing, Mich.
Campbell & Budlong Machine Works, San
Jose, Calif.
Champion Corp., Hammond, Ind.
Eureka Mower Co., Utica, N.Y.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
William Stahl Sprayer Co., Quincy, Ill.
Edwin C. Tyson, Flora Dale, Pa.

STATIONARY

John Bean Mfg. Co., Lansing, Mich.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio

TRACTION

John Bean Mfg. Co., Lansing, Mich.
Eureka Mower Co., Utica, N.Y.
A. B. Farquhar Co., Ltd., York, Pa.
Field Force Pump Co., Elmira, N.Y.
Friend Mfg. Co., Gasport, N.Y.
Hardie Mfg. Co., Hudson, Mich.
F. E. Myers & Bro. Co., Ashland, Ohio

INSECT AND DISEASE CONTROL

SPRAYING MATERIALS

Arsenicals

ARSENATE OF CALCIUM

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
Ansbacher-Siegle Corp., Brooklyn, N.Y.
Bowker Chemical Co., New York, N.Y.
California Spray-Chemical Corp., Berkeley, Calif.
Central Chemical Co., Inc., Baltimore, Md.
Chipman Chemical Co., Bound Brook, N.J.
Corona Chemical Co., Milwaukee, Wis.
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
General Chemical Co., New York, N.Y.
Interstate Chem. Mfg. Co., Jersey City, N.J.
John Lucas Co., Philadelphia, Pa.
Mechling Bros. Chemical Co., Camden, N.J.
Micronizer Processing Co., Inc., Moorestown, N.J.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Sherwin-Williams Co., Cleveland, Ohio

ARSENATE OF LEAD

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
Ansbacher-Siegle Corp., Brooklyn, N.Y.
Bowker Chemical Co., New York, N.Y.
California Spray-Chemical Corp., Berkeley, Calif.
Central Chemical Co., Inc., Baltimore, Md.
Chipman Chemical Co., Bound Brook, N.J.
Corona Chemical Co., Milwaukee, Wis.
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
General Chemical Co., New York, N.Y.
Interstate Chem. Mfg. Co., Jersey City, N.J.
John Lucas Co., Philadelphia, Pa.
Mechling Bros. Chemical Co., Camden, N.J.
Micronizer Processing Co., Inc., Moorestown, N.J.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Sherwin-Williams Co., Cleveland, Ohio

ARSENITE OF ZINC

California Spray-Chemical Corp., Berkeley, Calif.
General Chemical Co., New York, N.Y.
Sherwin-Williams Co., Cleveland, Ohio

MAGNESIUM ARSENATE

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
Dow Chemical Co., Midland, Mich.
Mechling Bros. Chemical Co., Camden, N.J.

ANSBACHER

Established Nearly 90 Years

America's first insecticide company approaches its ninetieth year, grateful for the pleasant and valuable experiences acquired through the long scientific and practical association with growers' problems. Today this extraordinary fund of knowledge combines with modern facilities to produce Insecticides and Fungicides which are receiving ever increasing recognition for better orchard protection. Year in and year out, the high-quality and high-profit returns in leading orchards confirm this; and you, too, will find it worthwhile to know more about Ansbacher materials and services.

ANSBACHER-SIEGLE CORPORATION

310 No. Seventh St. Brooklyn, N.Y.

MANGANESE ARSENATE

E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.

PARIS GREEN

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
Ansbacher-Siegle Corp., Brooklyn, N.Y.
Central Chemical Co., Inc., Baltimore, Md.
Chipman Chemical Co., Bound Brook, N.J.
Dow Chemical Co., Midland, Mich.
General Chemical Co., New York, N.Y.
Interstate Chem. Mfg. Co., Jersey City, N.J.
Fred L. Lavanburg, New York, N.Y.
Mechling Bros. Chemical Co., Camden, N.J.
Sherwin-Williams Co., Cleveland, Ohio

Copper Compounds

BASIC COPPER SULPHATE

Sherwin-Williams Co., Cleveland, Ohio

BORDEAUX MIXTURE

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
Ansbacher-Siegle Corp., Brooklyn, N.Y.
Bowker Chemical Co., New York, N.Y.
California Spray-Chemical Corp., Berkeley, Calif.
Chipman Chemical Co., Bound Brook, N.J.
Corona Chemical Co., Milwaukee, Wis.
Dow Chemical Co., Midland, Mich.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.
General Chemical Co., New York, N.Y.
John Lucas Co., Philadelphia, Pa.
Mechling Bros. Chemical Co., Camden, N.J.
Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
Sherwin-Williams Co., Cleveland, Ohio

COPPER OXYCHLORIDE

Röhm & Haas Co., Philadelphia, Pa.

(Copper Oxychloride)

CUPRO-K

Fungicide

For FRUITS and VEGETABLES
Röhm & Haas Co. Phila., Pa.

COPPER SILICATE

California Spray-Chemical Corp., Berkeley, Calif.

COPPER SULPHATE

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
General Chemical Co., New York, N.Y.
Mechling Bros. Chemical Co., Camden, N.J.
Nichols Copper Co., New York, N.Y.
Sherwin-Williams Co., Cleveland, Ohio
Tennessee Corp., Lockland, Ohio

Fluorine Compounds

Aluminum Ore Co., Pittsburgh, Pa.
American Cyanamid & Chemical Corp., Insecticide Dept., New York, N.Y.
E. I. du Pont de Nemours & Co., Inc., Graselli Chemicals Dept., Wilmington, Del.
Kalo Co., Quincy, Ill.
Stauffer Chemical Co., New York, N.Y.

"MAGNETIC" CRYOLITE-SULPHUR DUST CRYOLITE-SULPHUR SPRAY CRYOLITE DUST

A new synthetic cryolite combined with sulphur to make an insecticide and fungicide in one.
STAUFFER CHEMICAL CO.
CHICAGO—420 LEX. AVE., N.Y.C.—FREEPORT, TEX.

FRANCE AGRICULTURAL SPRAYING HYDRATED LIME

Produced at Keokuk, Ind.

Analysis: 99.5% through 200 Mesh Sieve
Availability—93% or more Calcium Hydroxide
THE FRANCE STONE CO. Toledo, Ohio
GOOD PRODUCTS . . . for over 50 years

Lime

American Lime & Stone Co., Bellefonte, Pa.
France Stone Co., Toledo, Ohio
Gibsonburg Lime Products Co., Gibsonburg, Ohio
Ohio Hydrate & Supply Co., Woodville, O.
Scioto Lime & Stone Co., Delaware, Ohio

INCREASED YIELDS

AS REPORTED BY EXPERIMENTAL STATIONS OF MAINE, NEW YORK, OHIO, MICHIGAN, AND VIRGINIA

BY USING

OHIO SUPERSPRAY

Hi-Magnesium Lime

(300 Mesh)

FOR SPRAYING & DUSTING

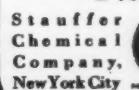
Write for Spray Calendar and Further Information

OHIO HYDRATE & SUPPLY CO. WOODVILLE, OHIO

MFGRS. OF LIME & LIMESTONE PRODUCTS
FOR AGRICULTURAL, BUILDING & INDUSTRIAL USES

ALORCO CRYOLITE

Distributors:



Stauffer
Chemical
Company,
New York City

E. I. du Pont de
Nemours, Graselli
Chemicals Dept.,
Wilmington, Del.

EXTRA

Orchard Brand News



EXTRA

VOL. 1, NO. 4

JUNE

1937

EASTERN EDITION

ZINTOX...A BASIC ZINC ARSENATE SIMPLIFIES RESIDUE PROBLEM!

Statement By The Crop Protection Institute Regarding General Chemical Company's Basic Zinc Arsenate

During 1934, 1935 and 1936 The Crop Protection Institute, in cooperation with eight state experiment stations, conducted a series of field tests concerning the use of General Chemical Company's Basic Zinc Arsenate in the control of the Codling Moth. Comparative tests were made with Basic Zinc Arsenate, Lead Arsenate and Calcium Arsenate. The experiments were run with and without stickers. The results of these tests may be summarized as follows:

Basic Zinc Arsenate was as safe to use on apple fruit and foliage as Lead Arsenate.

Basic Zinc Arsenate was definitely more efficient than Calcium Arsenate when used comparatively throughout the season, or in late season sprays.

Basic Zinc Arsenate was slightly less efficient than Lead Arsenate when used comparatively in all Codling Moth sprays.

Where Basic Zinc Arsenate plus an efficient sticker was used, the Basic Zinc Arsenate accomplished control that was equally as effective as the control obtained through the use of Lead Arsenate without a sticker.

Where Basic Zinc Arsenate was substituted for Lead Arsenate in the last two or three sprays of the season, there was little or no reduction in control.

But there was, however, a marked decrease in lead residue.

A typical result of substitution in a schedule of seven Codling Moth sprays was as follows: Where Basic Zinc Arsenate was substituted in the last two cover sprays, the lead residue at harvest amounted to 59.8% of that left by the comparative Lead Arsenate schedule. Where substitution was made in the last three cover sprays the lead residue at harvest amounted to 33.5% of that left by seven Lead Arsenate sprays. In either of the two previously mentioned cases there was no sacrifice of control.

It is apparent that Basic Zinc Arsenate can be used to definite advantage in the last two or three cover applications of any apple spray schedule. Basic Zinc Arsenate so used will not only maintain good control attained with earlier Lead Arsenate sprays but will greatly simplify the removal of lead residues to meet Federal tolerance.

The Crop Protection Institute



Apple Bill says: "Zintox sure saves a lot of headaches at packing time."

FOR LATE SEASON SPRAYS—ZINTOX, A BASIC ZINC ARSENATE

Zintox is not a complete substitute for, but is rather a companion to, "Astringent" Arsenate of Lead in the apple spray program. Definitely superior to the available Calcium Arsenates and Fluorine compounds, and slightly less efficient than "Astringent" Arsenate of Lead, it finds its place in the late cover sprays. There it maintains the control gained by "Astringent" Arsenate of Lead in the more crucial early sprays and it halts the accumulation of lead residues.

GENERAL CHEMICAL COMPANY • 40 Rector Street, New York

Please send me information on Zintox, A Basic Zinc Arsenate, and other Orchard Brand products.

Name _____

University of Idaho

Address _____

LIBRARY

City _____

MOSCOW IDAHO

State _____

AFG-4

GENERAL CHEMICAL COMPANY

Executive Offices: 40 Rector Street, New York City

*Sales Offices: Atlanta • Baltimore • Boston • Buffalo • Charlotte • Chicago • Cleveland
Denver • Houston • Kansas City • Los Angeles • Minneapolis • Montezuma (Ga.)
Philadelphia • Pittsburgh • Providence • San Francisco • St. Louis • Wenatchee
Yakima • In Canada: The Nichols Chemical Company, Ltd. • Montreal • Toronto*

*Reg. U. S. Pat. Off.

Products: Lime Sulphur Solution • Dry Lime Sulphur • Arsenite of Zinc
Bordeaux Mixture, Powder and Paste • Dritomic Sulphur • Apple Dritomic Sulphur
Arsenate of Lead with Astringent • Arsenate of Lead, Standard • Paris Green • Sulphur, Soil
Arsenate of Lead, Basic • Nicotine Sulphate 40% • Calcium Arsenate • Instant Bluestone
X-13 (Pyrethrum Base) • Para-dichlorobenzene • Zintox, A Basic Zinc Arsenate • Sulphur,
Arsenical, Nicotine, Bordeaux, Copper-Lime, and Rotenone Dusts, in Desired Mixtures.

NICHOLS

COPPER SULPHATE
99% pure, always uniform—the standard for home mixed
BORDEAUX MIXTURE
•
Mono-Hydrated Copper Sulphate
35% Metallic Copper Content

NICHOLS COPPER CO.
A Unit of the Phelps-Dodge Corporation
40 WALL ST. N.Y.C. • 230 N MICH AVE. CHICAGO



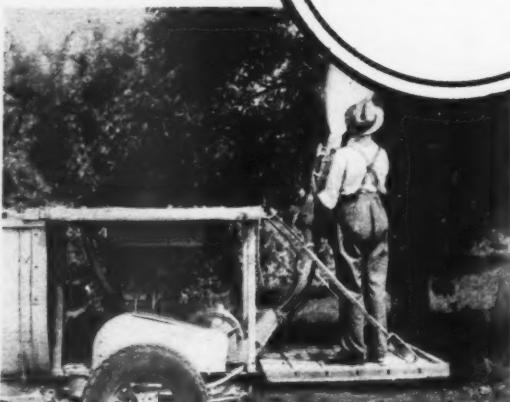
When you think of
SPRAY AND DUST MATERIALS
think of
ANSBACHER-HAGERSTOWN CHEMICAL CORPORATION, HAGERSTOWN, MARYLAND
"Quality Leader for Over 85 Years"

PENETROL
and
NICOTROL
Manufactured by
KAY-FRIES CHEMICALS, Inc.
180 Madison Ave., New York City

Niagara
KOLOFOG

2
**SPRAYS
IN ONE**

The Best Sticker for Arsenate of Lead. The Best Fungicide for Summer Spraying on Apples, Peaches and other fruits.



KOLOFOG PROTECTION

IS PROFIT PROTECTION

Orchardists who have used KoloFog are reluctant to experiment further. Easy to mix, completely colloidal, KoloFog greatly simplifies the actual work of spraying.

KoloFog (Fused-Bentonite Sulphur) is a sulphur fungicide in its finest form. Because KoloFog (Fused-Bentonite Sulphur) contains a colloid of the irreversible type, once dried on a leaf, it can never be wet again. Unlike the so-called "wettable" sulphurs which after spraying are washed off the leaf with the first rain, KoloFog sticks and protects. This "sticking" quality in KoloFog makes it a most efficient carrier for arsenical poisons or their non-poisonous substitutes, Rotenone and Nicotine Sulphate.

Niagara distributors and dealers will gladly advise you how best to save your crop and increase your profits with KoloFog.



NIAGARA SPRAYER & CHEMICAL CO., INC.

MIDDLEPORT, NEW YORK

SAN FRANCISCO, CALIFORNIA

JACKSONVILLE, FLORIDA

CANADIAN ASSOCIATE

NIAGARA BRAND SPRAY CO. LTD. BURLINGTON, ONTARIO

INSECT AND DISEASE CONTROL

Nicotine Sulphate

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md. Chipman Chemical Co., Inc., Bound Brook, N.J.

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del. General Chemical Co., New York, N.Y. Kay-Fries Chemicals, Inc., New York, N.Y. Nicotine Production Corp., Clarksville, Tenn.

Tobacco By-Products & Chemical Corp., Louisville, Ky. Tri-Tox Chemical Co., Washington, Ind.

CITRUS SPRAY-CREAM

A citrus spray which apple growers have found to be a safe, effective summer oil emulsion at less cost. Dept. 11, B. G. Pratt Co., 50 Church St., New York.

Oils

EMULSIONS AND MISCELLANEOUS OILS—Summer Oils, Dormant Oils, and Tar Emulsions

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.

Ansbacher-Siegle Corp., Brooklyn, N.Y. California Spray-Chemical Corp., Berkeley, Calif.

Central Chemical Co., Inc., Baltimore, Md. Wm. H. Cooper & Nephews, Chicago, Ill. Dow Chemical Co., Midland, Mich.

H. A. DuBois & Sons, Inc., Cobden, Ill.

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.

E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.

General Chemical Co., New York, N.Y. Gulf Refining Co., Pittsburgh, Pa.

Mechling Bros. Chemical Co., Camden, N.J.

National Oil Products Co., Harrison, N.J. Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.

B. G. Pratt Co., New York, N.Y.

W. T. Rawleigh Co., Freeport, Ill.

Schaeffer Bros. & Powell Mfg. Co., St. Louis, Mo.

Sherwin-Williams Co., Cleveland, Ohio

Silmo Chemical Co., Inc., Vineland, N.J.

Socony-Vacuum Oil Co., Inc., New York, N.Y.

Standard Oil Co. of Indiana, Chicago, Ill. Standard Oil Co. of New Jersey, New York, N.Y.

Standard Oil Co. of Ohio, Cleveland, Ohio Sun Oil Co., Philadelphia, Pa.

Texas Co., New York, N.Y.

J. W. Woolfolk Co., Fort Valley, Ga.

SCALECIDE

The oldest and best known dormant oil spray for scale, aphids, red mites, etc. Solves your toughest spray problems. Does a complete job. Dept. 11, B. G. Pratt Co., 50 Church St., New York.

SUNOCO
SELF EMULSIFYING SPRAY

The best of its type for control of SCALE and EUROPEAN RED MITE. Thirteen years of successful use in orchards.

Special low price on carload.

Sun Oil Company, Philadelphia
Makers of BLUE SUNOCO Motor Fuel

CODLING MOTHS

Menace 1937 Apple Crop

LET STANDARD'S SPRAY OILS HELP WIN THE FIGHT
AGAINST THIS DESTROYER OF YOUR PROFITS

Reliable authorities warn that the carryover of codling moth worms is the heaviest in years! Unless the *first brood* is checked, severe losses are inevitable.

Specifically developed for Codling Moth control, *Superla Summer Spray Oil* has proved its superior effectiveness wherever used. It is our preferred recommendation for combating the attack of this pest because of its high and lasting killing power, improved spray deposit qualities, better spreading properties and its ability to resist absorption by plant tissues. Used with arsenate of lead it has proved more effective than any other material available, delivering a high percentage of clean, finely finished fruit. Combined with nicotine sulphate it has provided good moth control, particularly in the

later brood sprays, and has been highly effective in controlling leafhoppers, which have become increasingly troublesome in many sections.

Being perfectly compatible with the new "fixed nicotines," both proprietary and home-mixed, Superla, in this combination, will give practically as good moth control as oil-lead and lime. Used in all but one cover spray, this will eliminate the need for washing. Fixed nicotine is a most promising development, about which growers should inform themselves.

Growers who prefer a paste type emulsion will find Verdal Summer Spray Oil an effective, reliable material. It may be used in all the combinations recommended for Superla.

DORMANT OILS

DENDROL DORMANT SPRAY OIL

A tried, proved control for San Jose scale, red mites, and leaf rollers. The most dependable of the dormant spray oils.

STANDARD DORMANT EMULSION

Compatible with lime-sulphur.

STANDARD APHID SPRAY OIL

A powerful agent for control of aphids, scale, and other insects subject to dormant treatment.

STANOLIND DORMANT SPRAY OIL

A new inexpensive dormant oil.

If you have any insect control problems that are troublesome, consult our tree spray representatives. They will be glad to do what they can to help find a solution.

Have you received your copy of "OIL SPRAYS—A FRUIT GROWER'S HANDBOOK AND RECORD"? If not, send for it today. It's free.

STANDARD OIL COMPANY

910 SOUTH MICHIGAN AVENUE

JUNE, 1937

CHICAGO, ILLINOIS

AMERICAN FRUIT GROWER

PAGE 31

INSECT AND DISEASE CONTROL

Pyrethrum and Derivatives

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
 Ansbacher-Siegle Corp., Brooklyn, N.Y.
 Chipman Chemical Co., Bound Brook, N.J.
 General Chemical Co., New York, N.Y.
 Kalo Co., Quincy, Ill.
 Kay-Fries Chemicals, Inc., New York, N.Y.
 McCormick & Co., Inc., Baltimore, Md.
 McLaughlin Gormley King Co., Minneapolis, Minn.
 Mechling Bros. Chemical Co., Camden, N.J.
 B. G. Pratt Co., New York, N.Y.

RED ARROW GARDEN SPRAY
KILLS BOTH SUCKING and CHEWING INSECTS
 Your jobber can supply you
 Most highly concentrated pyrethrum-soap spray
 on the market.
 WRITE FOR FREE SPRAY CHART
THE McCORMICK SALES CO.
 BALTIMORE, MD.



D-X A remarkable new penetrating pyrethrum spray which saves $\frac{1}{2}$ the cost of nicotine. Controls aphids, leaf hoppers and other insects. Write today to Dept. 11, B. G. Pratt Co., 50 Church St., New York.

Rotenone Products

American Gypsum Co., Port Clinton, Ohio
 Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
 Ansbacher-Siegle Corp., Brooklyn, N.Y.
 Central Chemical Co., Inc., Baltimore, Md.
 Chipman Chemical Co., Bound Brook, N.J.
 General Chemical Co., New York, N.Y.
 Kalo Co., Quincy, Ill.
 McCormick & Co., Inc., Baltimore, Md.
 McLaughlin Gormley King Co., Minneapolis, Minn.
 Mechling Bros. Chemical Co., Camden, N.J.
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
 Rotenone Products Co., East Orange, N.J.
 Stauffer Chemical Co., New York, N.Y.

Silicate of Soda

E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
 Philadelphia Quartz Co., Philadelphia, Pa.

Spreaders, Soaps and Stickers

American Colloid Co., Chicago, Ill.
 American Cyanamid & Chemical Corp., Insecticide Dept., New York, N.Y.
 American Gum Products Co., New York, N.Y.
 Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
 Ansbacher-Siegle Corp., Brooklyn, N.Y.
 California Spray-Chemical Corp., Berkeley, Calif.
 Colloidal Products Corp., San Francisco, Calif.
 Crystal Soap & Chemical Co., Inc., Philadelphia, Pa.
 E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
 Golden State Co., Ltd., San Francisco, Calif.
 Golden State Sales Corp., New York, N.Y.
 Kay-Fries Chemicals, Inc., New York, N.Y.
 Mechling Bros. Chemical Co., Camden, N.J.
 Monsanto Chemical Co., Rubber Service Laboratories Div., Akron, Ohio
 National Casein Co., Chicago, Ill.
 National Oil Products Co., Harrison, N.J.
 B. G. Pratt Co., New York, N.Y.
 Röhm & Haas Co., Philadelphia, Pa.
 Sherwin-Williams Co., Cleveland, Ohio
 Silmo Chemical Co., Vineland, N.J.



SPRAY CATALIZER

A sensational new sulfur spreader which makes lime sulfur safer and more effective. Prevents black sludge. Increases build-up. Write today to Dept. 11, B. G. Pratt Co., 50 Church St., New York.

Sulphur

DRY LIME SULPHUR

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
 Ansbacher-Siegle Corp., Brooklyn, N.Y.
 Bowker Chemical Co., New York, N.Y.
 Central Chemical Co., Inc., Baltimore, Md.
 Chipman Chemical Co., Bound Brook, N.J.
 Corona Chemical Co., Milwaukee, Wis.
 Dow Chemical Co., Midland, Mich.
 H. A. Du Bois & Sons, Cobden, Ill.
 E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
 General Chemical Co., New York, N.Y.
 John Lucas Co., Philadelphia, Pa.
 Mechling Bros. Chemical Co., Camden, N.J.
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
 Sherwin-Williams Co., Cleveland, Ohio

LIQUID LIME SULPHUR

Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
 Ansbacher-Siegle Corp., Brooklyn, N.Y.
 Bowker Chemical Co., New York, N.Y.
 California Spray-Chemical Corp., Berkeley, Calif.
 Central Chemical Co., Inc., Baltimore, Md.
 Dow Chemical Co., Midland, Mich.
 H. A. Du Bois & Sons, Cobden, Ill.
 E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
 E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.
 General Chemical Co., New York, N.Y.
 John Lucas Co., Philadelphia, Pa.
 Mechling Bros. Chemical Co., Camden, N.J.
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
 Sanocide Spray Co., Fennville, Mich.
 Sherwin-Williams Co., Cleveland, Ohio

PINK SULPHUR

Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.

"MAGNETIC" CATALYTIC SULPHUR

A safer to be used in Lime Sulphur—Lead Arsenite Spray Combinations. Blocks formation of black sludge and harmful arsenical compounds.

STAUFFER CHEMICAL CO.
 CHICAGO—420 LEX. AVE., N.Y.C.—FREEPORT, TEX.

SPREAD-OL—

Has many uses in the spray schedule from dormant to last cover. Write for particulars or see your dealer.

SILMO CHEMICAL CO.
 Vineland, New Jersey

Before You Spray

● BE sure to investigate the many advantages of NOPCO SOLUBLE FISH OIL. This new development, the only product of its kind, will help you obtain increased effectiveness of spray materials; better control of insects and diseases; uniform coverage. Tested and approved by State Experimental Stations. Write TODAY for full details.



National Oil Products Company, Inc.
 Harrison, N.J.
 Boston, Chicago, Cedarburg, Ga., San Francisco

SOLUBLE SULPHUR

Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.
 Stauffer Chemical Co., New York, N.Y.

WETTABLE SULPHUR

American Cyanamid & Chemical Corp., Insecticide Dept., New York, N.Y.
 Ansbacher-Hagerstown Chemical Corp., Hagerstown, Md.
 Ansbacher-Siegle Corp., Brooklyn, N.Y.
 Battelle & Renwick, New York, N.Y.
 Calcium Sulphide Corp., Damascus, Va.
 California Spray-Chemical Corp., Berkeley, Calif.

Dow Chemical Co., Midland, Mich.
 H. A. Du Bois & Sons, Cobden, Ill.
 E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
 E. I. du Pont de Nemours & Co., Inc., R. & H. Chemicals Dept., Pacific Div., El Monte, Calif.

General Chemical Co., New York, N.Y.
 John Lucas Co., Philadelphia, Pa.
 Mechling Bros. Chemical Co., Camden, N.J.
 Merrimac Chemical Co., Everett, Mass.
 Micronizer Processing Co., Inc., Moorestown, N.J.

National Sulphur Co., Inc., New York, N.Y.
 Niagara Sprayer & Chemical Co., Inc., Middleport, N.Y.

Public Service Electric & Gas Co., Camden Coke Plant, Camden, N.J.

Sherwin-Williams Co., Cleveland, Ohio
 Stauffer Chemical Co., New York, N.Y.
 White Tar Co. of N.J., Inc., Kearny, N.J.

"MAGNETIC SPRAY"

WETTABLE SULPHUR

Magnetic Spray is a product of proven merit, used by successful growers everywhere for its unusual protecting qualities. Ask your dealer for "Magnetic Spray."

STAUFFER CHEMICAL CO.

CHICAGO—420 LEX. AVE., N.Y.C.—FREEPORT, TEX.

Micronized Wettable Sulfur
 (Average Particle Size—4000 Mesh)

Micronized Sulfur Dusts
 (Average Particle Size—2000 Mesh)

Micronizer Processing Company, Inc.
 Moorestown, N.J.

Zinc Compounds

ZINC SULPHATE

Central Chemical Co., Inc., Baltimore, Md.
 E. I. du Pont de Nemours & Co., Inc., Grasselli Chemicals Dept., Wilmington, Del.
 Sherwin-Williams Co., Cleveland, Ohio
 Tennessee Corp., Lockland, Ohio
 Virginia Smelting Co., West Norfolk, Va.

36% ZINC SULFATE

"ORIGINAL FINE 89% GRANULAR"

VASCO-4-seed treatment

VIRGINIA SMELTING COMPANY
 West Norfolk, Virginia

MAN WITH CAR WANTED

To conduct world-renowned home-service business—over 8,000 Rawleigh Dealers. Must do \$3,000-\$5,000 annual business. Is necessary to have home farm. Send for information how to start in business on capital. Dept. F-78-AFG.

W.T. Rawleigh Co., Pratt, Ill.

*Includes nationally recognized D. & D. for orchard spraying—thousands of gallons sold yearly.

STORAGES

Blowers and Fans

American Blower Corp., Detroit, Mich.
Autovent Fan & Blower Co., Chicago, Ill.
Buffalo Forge Co., Buffalo, N.Y.
Clarge Fan Co., Kalamazoo, Mich.
Coppus Engineering Corp., Worcester,
Mass.
Craine, Inc., Norwich, N.Y.
Diehl Mfg. Co., Elizabeth, N.J.
Ilg Electric Ventilating Co., Chicago, Ill.
Niagara Blower Co., Buffalo, N.Y.
L. J. Wing Mfg. Co., New York, N.Y.
Wolverine Blower Works, Grand Rapids,
Mich.

Building Papers

Angier Corp., Framingham, Mass.
Sisalcraft Co., Chicago, Ill.

Doors

Baker Ice Machine Co., Inc., Omaha,
Nebr.
Craine, Inc., Norwich, N.Y.
Bernard Gloekler Co., Pittsburgh, Pa.
Jamison Cold Storage Door Co., Hagers-
town, Md.
National Refrigerator Co., St. Louis, Mo.
Parker Ice Machine Co., Inc., San Ber-
nardino, Calif.
Phoenix Ice Machine Co., Cleveland, O.
York Ice Machinery Corp., York, Pa.

Ducts, Air

Carrier Corp., Newark, N.J.
L. O. Koven & Bro., Inc., Jersey City, N.J.
Mead-Penn Iron Wks. Co., Meadville, Pa.
Stover Steel Tank & Mfg. Co., Freeport,
Ill.
Treadwell Construction Co., Midland, Pa.



Get PERMANENT Insulating Efficiency in Storage Rooms!

Basically mineral, hence imperishable, J-M Rock Cork maintains its unusually high insulating effectiveness year after year. Easily applied, adaptable to every type of construction . . . its use offers the following advantages in fruit-storage rooms:

Unusual resistance to moisture infiltration . . . Immunity to rot and decay . . . Proof against termites . . . Freedom from mold and bacteria . . . Never absorbs or gives off odors.

As a result, J-M Rock Cork is economically, permanently solving the storage-insulation problem for fruit growers everywhere. For details, write Johns-Manville, 22 E. 40th St., N.Y.C.

Johns-Manville ROCK CORK

Low-temperature insulation for sheets
and for pipe covering

JUNE, 1937

Hoists, Electric

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Detroit Hoist & Machine Co., Detroit,
Mich.
Electro Lift, Inc., New York, N.Y.
Fairbanks, Morse & Co., Chicago, Ill.
Robbins & Myers, Inc., Springfield, Ohio
Shepard Niles Crane & Hoist Corp., Mon-
tour Falls, N.Y.
Silent Hoist Winch & Crane Co., Brook-
lyn, N.Y.
Yale & Towne Mfg. Co., Philadelphia, Pa.

PHOENIX ICE MACHINE
REFRIGERATION EARNS PROFITS FOR
FRUIT AND VEGETABLE GROWERS
Write or Wire
The Phoenix Ice Machine Co. Cleveland
2703 Church St.

Humidifiers

American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N.Y.
Carrier Corp., Newark, N.J.
Ilg Electric Ventilating Co., Chicago, Ill.
Westinghouse Electric & Mfg. Co., East
Pittsburgh, Pa.

Insulation

Armstrong Cork Products Co., Lancaster,
Pa.
Bird & Son, E. Walpole, Mass.
Philip Carey Co., Lockland, Ohio
The Celotex Corp., Chicago, Ill.
Cork Insulation Co., New York, N.Y.
Craine, Inc., Norwich, N.Y.
Excelsior Mills Corp., Jacksonville, Fla.
Gay Engineering Corp., Los Angeles,
Calif.
General Insulating & Mfg. Co., St. Louis,
Mo.
Insulite Co., Minneapolis, Minn.
Johns-Manville, New York, N.Y.
Masonite Corp., Chicago, Ill.
Mitchell & Smith, Inc., Detroit, Mich.
National Gypsum Co., Buffalo, N.Y.
Owens-Illinois Glass Co., Toledo, Ohio
Pacific Lumber Co., San Francisco, Calif.
Pacific Lumber Co. of Illinois, Chicago,
Ill.
Red Head Brand Co., Chicago, Ill.
Reynolds Metals Co., Inc., New York, N.Y.
Rubberoid Co., New York, N.Y.
Servicised Products Corp., Chicago, Ill.
Silvercote, Inc., Kalamazoo, Mich.
United Cork Companies, Kearny, N.J.
U. S. Gypsum Co., Chicago, Ill.
Wood Conversion Co., St. Paul, Minn.

Refrigeration Machinery

Advanced Refrigeration Systems, Inc.,
Philadelphia, Pa.
Automatic Refrigerating Co., Hartford,
Conn.
Baker Ice Machine Co., Inc., Omaha,
Nebr.
Ball Ice Machine Co., St. Louis, Mo.
Bedell Engineering Co., Los Angeles,
Calif.
Buffalo Refrigerating Machinery Co.,
Brooklyn, N.Y.
Burge Ice Machine Co., Chicago, Ill.
Carrier Corp., Newark, N.J.
De La Vergne Engine Co., Inc., Philadel-
phia, Pa.
Frick Co., Waynesboro, Pa.
Frigidaire Corp., Dayton, Ohio
Gay Engineering Corp., Los Angeles,
Calif.
General Electric Co., Cleveland, Ohio
General Refrigeration Sales Co., Beloit,
Wis.
Harris Ice Machine Works, Portland, Ore.
Hill Diesel Engine Co., Lansing, Mich.
Howe Ice Machine Co., Chicago, Ill.
Nash-Kelvinator Corp., Detroit, Mich.
Norge Corp., Detroit, Mich.
Parker Ice Machine Co., Inc., San Bern-
ardino, Calif.
Phoenix Ice Machine Co., Cleveland,
Ohio
Remington Machine Co., Wilmington, Del.
Servel Inc., Evansville, Ind.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric & Mfg. Co., Mans-
field, Ohio
Worthington Pump & Machinery Corp.,
Harrison, N.J.
York Ice Machinery Corp., York, Pa.



Keep fruit in your own cold storage at
an overall cost of 10 to 12 cents a bu. for the
season. You can do it with Frick Refrigeration.
Branches and Distributors everywhere: write

FRICK CO. DEFENDANT REFRIGERATION SINCE 1881
WAYNESBORO PENNA. U.S.A.

FRUIT STORAGE

Kalamazoo Glazed Tile
Insulated with Palco Wool



Kalamazoo Tank & Silo Co. KALAMAZOO MICHIGAN
AMERICAN FRUIT GROWER

PAGE 33

Successful fruit growers all
over the Middle West have
proven the superiority of Kal-
amazoo Glazed Tile storage
insulated with Palco Wool.
Low in cost—high in effi-
ciency—beautiful in appear-
ance—low cost of upkeep.
Write for complete informa-
tion. Let us help solve your
storage problem.

STORAGES

Roofing

Barber Asphalt Co., Philadelphia, Pa.
Barrett Co., New York, N.Y.
Bird & Son, E. Walpole, Mass.
Brown Fence & Wire Co., Cleveland,
Ohio
A. M. Byers Co., Pittsburgh, Pa.
Philip Carey Mfg. Co., Lockland, Ohio
Craine, Inc., Norwich, N.Y.
Edwards Mfg. Co., Cincinnati, Ohio
Flintkote Co., New York, N.Y.
Gay Engineering Corp., Los Angeles,
Calif.
Globe Iron Roofing & Corrugating Co.,
Cincinnati, Ohio
Johns-Manville, New York, N.Y.
Lehon Co., Chicago, Ill.
National Fireproofing Co., Pittsburgh, Pa.
National Roofing Co., Tonawanda, N.Y.
Ruberoid Co., New York, N.Y.
Southport Paint Co., Inc., Savannah, Ga.
Texas Co., New York, N.Y.
U. S. Gypsum Co., Chicago, Ill.

Thermostats

Baker Ice Machine Co., Omaha, Nebr.
Bristol Co., Waterbury, Conn.
Carrier Corp., Newark, N.J.
General Electric Co., Schenectady, N.Y.
H-B Instrument Co., Inc., Philadelphia, Pa.
Powers Regulator Co., Chicago, Ill.
Taylor Instrument Co., Rochester, N.Y.
Westinghouse Electric & Mfg. Co., East
Pittsburgh, Pa.

Tile, Building

Craine, Inc., Norwich, N.Y.
Kalamazoo Tank & Silo Co., Kalamazoo,
Mich.
Masonite Corp., Chicago, Ill.
National Fireproofing Co., Pittsburgh, Pa.
New Bethlehem Tile Co., New Bethlehem,
Pa.

Ventilators

Baker Ice Machine Co., Inc., Omaha,
Nebr.
Clay Equipment Corp., Cedar Falls, Iowa
Craine, Inc., Norwich, N.Y.
Gay Engineering Corp., Los Angeles,
Calif.
Ilg Electric Ventilating Co., Chicago, Ill.
James Mfg. Co., Ft. Atkinson, Wis.
Kirk & Blum Mfg. Co., Cincinnati, Ohio
Louden Machinery Co., Fairfield, Iowa
Moore Dry Kiln Co., N. Portland, Ore.
Royal Ventilator Co., Philadelphia, Pa.

Waterproofing Compounds

Barber Asphalt Co., Philadelphia, Pa.
Bird & Son, Inc., E. Walpole, Mass.
Ceresit Waterproofing Corp., Chicago, Ill.
Johns-Manville, New York, N.Y.
Koppers Products Co., Pittsburgh, Pa.
Master Builders Co., Cleveland, Ohio
Toch Brothers, Inc., New York, N.Y.
Waterproofing Co., New York, N.Y.

IN ROCHESTER, NEW YORK

HOTEL ROCHESTER
Radio in Every Room
Air Conditioned
Lobby, Dining Room, Grill
★

IN KINGSTON, NEW YORK

THE GOVERNOR CLINTON
Headquarters Hotel for
1938 Eastern Convention and Show
N. Y. State Horticultural Society

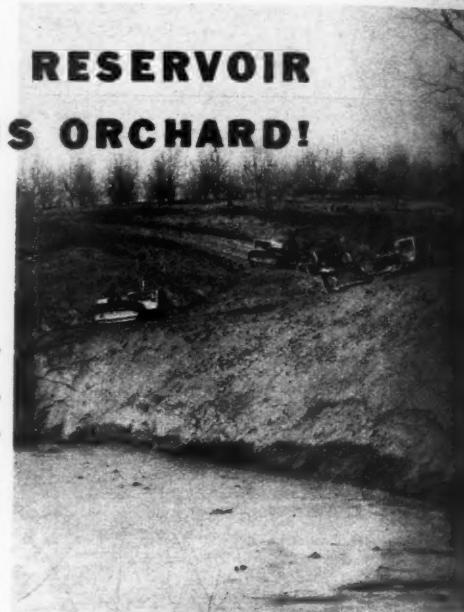
TILLAGE EQUIPMENT

Cultivators and Harrows

S. L. Allen & Co., Inc., Philadelphia, Pa.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Athens Plow Co., Athens, Tenn.
Barker Mfg. Co., David City, Nebr.
Blount Plow Works, Evansville, Ind.
J. I. Case Co., Racine, Wis.
Centaur Tractor Corp., Greenwich, Ohio
Champion Corp., Hammond, Ind.
Cleveland Tractor Co., Cleveland, Ohio
Cutaway Harrow Co., Higganum, Conn.
John Deere, Moline, Ill.
Dempster Mill Mfg. Co., Beatrice, Nebr.
Farm Tools, Inc., Mansfield, Ohio
A. B. Farquhar Co., Ltd., York, Pa.

Gravely Motor Plow & Cultivator Co.,
Dunbar, W. Va.
Handy Harrow Co., Peoria, Ill.
Hussey Plow Co., N. Berwick, Maine
International Harvester Co., Chicago, Ill.
Lehr Co., Fremont, Ohio
Massey-Harris Co., Racine, Wis.
Minneapolis-Moline Power Implement Co.,
Minneapolis, Minn.
Nash-Acme Harrow Co., Haddonfield, N.J.
Ohio Cultivator Co., Bellevue, Ohio
Oliver Farm Equipment Sales Co., Chi-
cago, Ill.
Pioneer Mfg. Co., West Allis, Wis.
Towner Mfg. Co., Santa Ana, Calif.
Utilitor Co., Dayton, Ohio
Wiard Plow Co., Batavia, N.Y.

IRRIGATION RESERVOIR FOR ILLINOIS ORCHARD!



These three "Caterpillar" track-type Tractors are building a dam to impound irrigation water—for the Thos. S. Smith & Sons, Inc., orchard near Roodhouse, Illinois.

One Diesel RD4 and Twenty-Two belong to this fruit grower—the other Diesel RD4 belongs to a farm power contractor. Each machine is moving 160 yards of dirt per 8-hour day—on a 300-foot haul—using less than 18 gallons of low-cost fuel.

Thus does this orchardist arm

against another drouth like 1936. And thus do "Caterpillar" track-type Tractors prove their fitness for special—as well as regular—orchard work. They'll be ready to pump water, between spraying and cultivating jobs—at record low cost!

CATERPILLAR TRACTOR CO. PEORIA, ILL.

REG. U. S. PAT. OFF.



WORLD'S LARGEST MANUFACTURER OF DIESEL ENGINES AND TRACK-TYPE TRACTORS

CATERPILLAR TRACTOR CO., Dept. A-6, Peoria, Illinois

Gentlemen: I operate _____ acres of orchard.

My power is _____

Please send facts on:

Orchard Model Twenty-Two (Gasoline or Distillate) Orchard Model Diesel RD4

NAME _____ TOWN _____ STATE _____

COUNTY _____ R. F. D. _____ STATE _____

TILLAGE EQUIPMENT

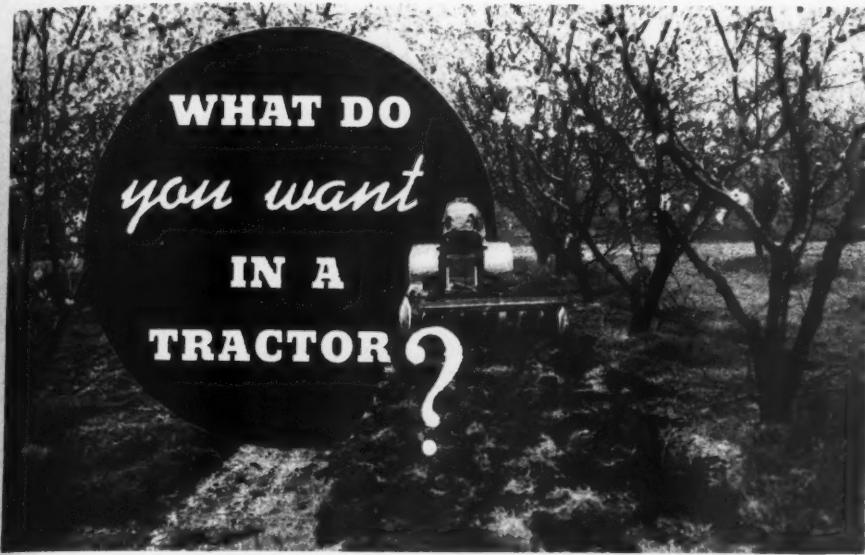
Explosives

Atlas Powder Co., Wilmington, Del.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Hercules Powder Co., Wilmington, Del.

Fertilizer Distributors

S. L. Allen & Co., Inc., Philadelphia, Pa.
Blount Plow Works, Evansville, Ind.
J. I. Case Co., Racine, Wis.
Cyclone Seeder Co., Urbana, Ind.
John Deere, Moline, Ill.
Farm Tools, Inc., Mansfield, Ohio

A. B. Farquhar Co., Ltd., York, Pa.
Gravely Motor Plow & Cultivator Co.,
Dunbar, W. Va.
Hampshire Implement Co., Hatfield, Mass.
International Harvester Co., Chicago, Ill.
Massey-Harris Co., Racine, Wis.
New Idea Co., Inc., Coldwater, Ohio
Ohio Cultivator Co., Bellevue, Ohio
Oliver Farm Equipment Sales Co., Chicago,
Ill.
Ontario Drill Co., E. Rochester, N.Y.
Smith Agr. Chemical Co., Columbus, Ohio
Wayne Agr. Works, Inc., Goldsboro, N.C.
Andrew Wilson, Inc., Springfield, N.J.



- Streamline Design? ● Short Turning?
- Power? ● Easy Handling? ● Choice of Fuel?

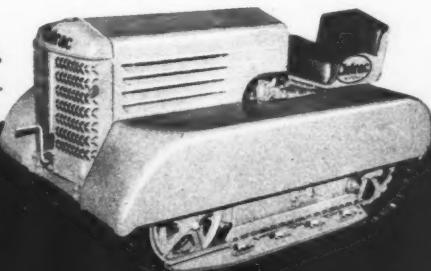
LOOK at Cletrac from any angle you please. Check the jobs you want a tractor to do—pull a heavy spray rig today...disc close around trees tomorrow...plow to full depth the next...and meantime complete such odd jobs as digging a ditch or pulling stumps.

In every operation around your orchard you'll find Cletrac delivers exactly what you want in a tractor. Crawler tracks go anywhere; controlled differential steering, exclusive with Cletrac, provides easy handling and short turns; low center of gravity and ample power enable you to work steepest hillsides; streamlined design slips readily through closely planted trees.

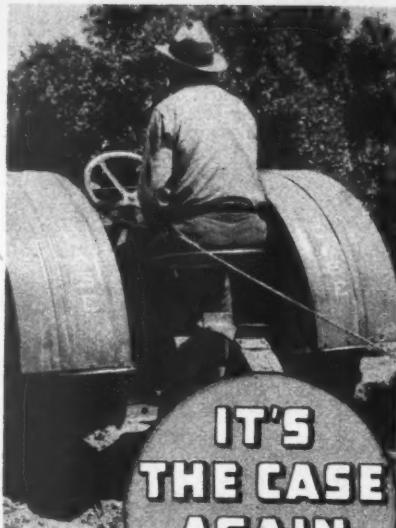
We believe you will get more for your money in Cletrac—not only in tractor alone, but also in the ability of Cletracs to make money for you through Cletrac's all year—all purpose usefulness. Ask the nearest dealer to prove these facts to you in your own orchard.

THE CLEVELAND TRACTOR CO.
19300 EUCLID AVE., CLEVELAND, O.

4 Models with Diesel Motors
11 Models with Gasoline or
Tractor Fuel Motors
22 - 94 Horsepower



CLETRAC CRAWLER TRACTORS



YOU
GET ALL THREE

IN A 1937
CASE TRACTOR

LOW . . .
LOWER
LOWEST

FIRST
COST
FUEL
COST
UPKEEP
COST

Fuel economy? Case tractors get amazing amounts of power out of *any* fuel from furnace oil to gasoline — *any* fuel fit for *any* practical farm or fruit tractor. But fuel is only part of power cost. Case tractors cost little to buy . . . give you a lot of power for every dollar of first cost. Most important, Case has longer life and lowest upkeep costs . . . lowest total cost.

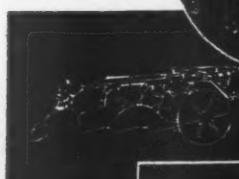
Case tractors pay better because they move faster, turn quicker, pull full loads on short turns, handle easier, do less damage to limbs and fruit. See these many-fuel, many-feature orchard tractors at your near-by Case dealer. Write for free book, "Money Ahead," to J. I. Case Co., Dept. F-12, Racine, Wis.

CASE
STEEL PLOW BUILDERS SINCE 1887

Case Centennial orchard plow. Clearance to handle heavy cover crops at any depth; high-speed bottoms to scour and cover; extra high, quick-acting lift.

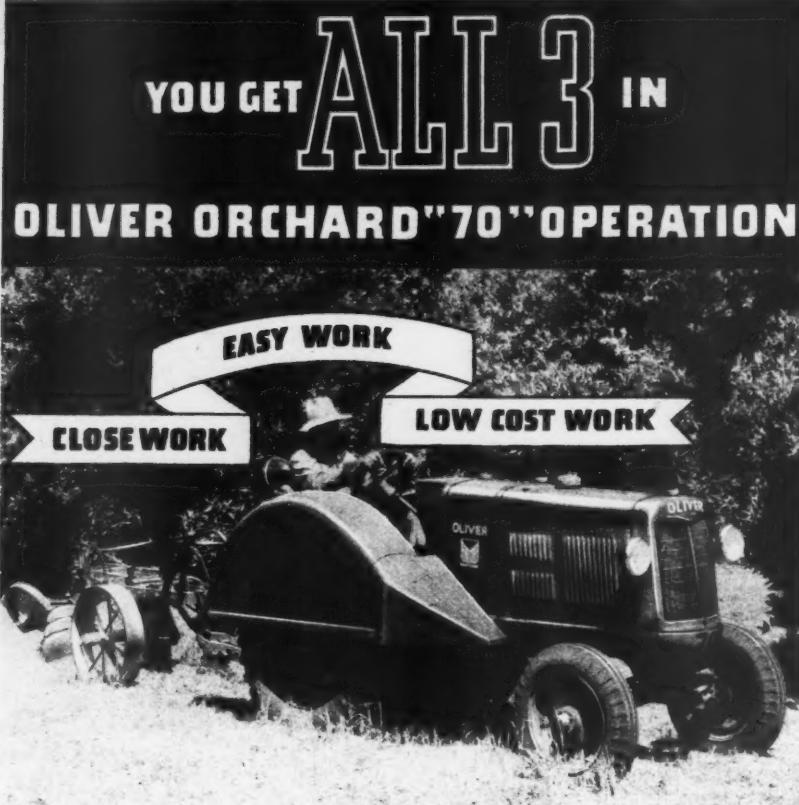


Case Subsoil Tiller with power-lift and crankscrew adjustment. Convertible to 3 or 1 standards.



Case "J" orchard disk harrow on-side and straight-on with crawler power under trip-rope control. Low frame; no levers; nothing to catch branches.





SEE, AND DRIVE, THE OLIVER ORCHARD "70"!

You work close and clean with an Oliver Orchard "70". Fully streamlined, it is free of all projections, shielded and guarded to prevent damage to your trees. It is low in height, short in turning radius, compact and handy.

You do your work easily. The spring-and-hammock seat is comfortable. You ride at ease. There is less work, less tiring vibration with the smooth-running, smooth-handling "70". It has a self-starter. It is as modern as a 1937 automobile and as easy to handle.

The "70" HC, with its High Compression Head and special manifold, gets maximum power and fuel economy from regular gasoline.

The "70" KD, with entirely different head and manifold, gets maximum power and fuel economy from kerosene or No. 1 distillate.

These Oliver "70" 6-cylinder engines get more power from the fuels which they are designed to

use than any so-called "all-fuel" engine can.

You pick the fuel you want to use, the "70" engine to use it most economically, and you have a tractor with smooth, quiet, 6-cylinder power for orchard cultivation.

The flow of power to the wheels is steadier. There is less lost motion, more efficient power and longer life for tractor and for tools.

Ask your Oliver Dealer for a demonstration of 6-cylinder power and fine farm machines. Or, send the coupon for complete information.



See your Oliver Dealer or check and mail the coupon to Oliver, 400 W. Madison St., Chicago, Ill.

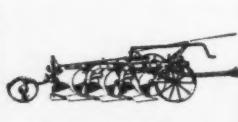
Universal
Name _____
LIBRARY
R. D. LIBRARY

No. _____
MOBILITY

State _____



- Orchard "70" Tractor
- Row Crop "70" Tractor
- 18-28 or 28-44 Tractor



- Orchard Tractor Plow
- Walking Plow
- Orchard Cultivator



- Orchard Disc Harrow
- Spring Tooth Harrow
- Hay Tools

AFG-3-37

DRIVE A 2-CYLINDER, A 4-CYLINDER, AND A 6-CYLINDER TRACTOR AND YOU'LL SEE WHY THE OLIVER "70" IS A "6"

TILLAGE EQUIPMENT

Mowers

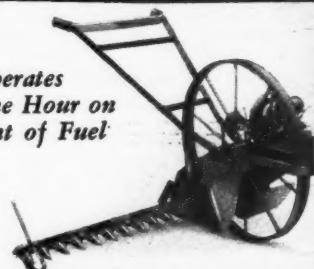
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
J. I. Case Co., Racine, Wis.
Centaur Tractor Corp., Greenwich, Ohio
John Deere, Moline, Ill.
Detroit Harvester Co., Detroit, Mich.
Farm Tools, Inc., Mansfield, Ohio
Gravely Motor Plow & Cultivator Co.,
Dunbar, W. Va.
International Harvester Co., Chicago, Ill.
Massey-Harris Co., Racine, Wis.
Minneapolis-Moline Power Implement Co.,
Minneapolis, Minn.
New Beeman Tractor Co., Minneapolis,
Minn.
Ohio Cultivator Co., Bellevue, Ohio
Oliver Farm Equipment Sales Co., Chi-
cago, Ill.

Plows, Disc and Moldboard

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Blount Plow Works, Evansville, Ind.
Bucher & Gibbs Plow Co., Philadelphia, Pa.
J. I. Case Co., Racine, Wis.
Centaur Tractor Corp., Greenwich, Ohio
Collins Plow Co., Quincy, Ill.
John Deere, Moline, Ill.
Farm Tools, Inc., Mansfield, Ohio
Gravely Motor Plow & Cultivator Co.,
Dunbar, W. Va.
International Harvester Co., Chicago, Ill.
Massey-Harris Co., Racine, Wis.
Minneapolis-Moline Power Implement Co.,
Minneapolis, Minn.
Ohio Cultivator Co., Bellevue, Ohio
Oliver Farm Equipment Sales Co., Chicago,
Ill.
Parker Plow Co., Richmond, Mich.
Pioneer Mfg. Co., West Allis, Wis.
Wayne Agr. Works, Inc., Goldsboro, N.C.
Wiard Plow Co., Batavia, N.Y.

Detroit Harvester MOTOR SCYTHE

Operates
One Hour on
Pint of Fuel



THE MOTOR SCYTHE DOES A WEEK'S WORK IN ONE DAY!

In the orchard the Motor Scythe is a speedy worker in mowing legumes around trees where the sod mulch system is used. It is ideal for under low branches where it is impossible to manipulate a horse drawn mowing machine, and difficult to reach with a scythe.

Sturdily built, perfectly balanced, and easily operated. Wheel 30 inches, cutting bar 36 inches, mowing a 30 inch swath. Air cooled motor operates 4 hours on $\frac{1}{2}$ gallon of gasoline. Weighs 135 pounds. List price \$125.00.

Write for dealer's name and full particulars.
Address

DETROIT HARVESTER CO.
5457 WEST JEFFERSON AVENUE, DETROIT

TILLAGE EQUIPMENT

Tractors, Continuous Tread

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Caterpillar Tractor Co., Peoria, Ill.
Cleveland Tractor Co., Cleveland, Ohio
International Harvester Co., Chicago, Ill.

Tractors, Garden

S. L. Allen & Co., Inc., Philadelphia, Pa.
Allied Motors Corp., Minneapolis, Minn.
American Farm Machine Co., Minneapolis, Minn.
Centaur Tractor Corp., Greenwich, Ohio
John Deere, Moline, Ill.
Gilson-Bolens Mfg. Co., Port Washington, Wis.

UNIVERSAL TRACTOR



PIONEER MFG. CO., DEPT. 19 WEST ALLIS, WIS.

Gravely Motor Plow & Cultivator Co., Dunbar, W. Va.
New Beeman Tractor Co., Minneapolis, Minn.
Pioneer Mfg. Co., West Allis, Wis.
Shaw Mfg. Co., Galesburg, Kans.
Standard Engine Co., Minneapolis, Minn.
Universal Mfg. Co., Indianapolis, Ind.
Utilitor Co., Dayton, Ohio
Walsh Tractor Co., Minneapolis, Minn.



In cars, trucks, tractors, sprayers and other orchard machinery, Hyatt Roller Bearings protect vital working parts . . . Most builders include them as regular equipment—but to play safe, look for Hyatts in the specifications . . . Likewise, should Hyatt replacements ever be required, be sure you get Genuine Hyatts—the correct equipment originally employed. Hyatt Bearings Division, General Motors Corporation, P. O. Box 476, Newark, N. J.

HYATT ROLLER BEARINGS

Tractors, Wheel

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
J. I. Case Co., Racine, Wis.
Centaur Tractor Corp., Greenwich, Ohio
John Deere, Moline, Ill.
Fate-Root-Heath Co., Plymouth, Ohio
Huber Mfg. Co., Marion, Ohio
International Harvester Co., Chicago, Ill.
Massey-Harris Co., Racine, Wis.
Minneapolis-Moline Power Implement Co., Minneapolis, Minn.
Oliver Farm Equipment Sales Co., Chicago, Ill.
Tractor Tractor Co., Benton Harbor, Mich.
Utilitor Co., Dayton, Ohio

JUNE, 1937

FOR
SHORTEST TURNING

POSITIVE control, the quick-acting "M" engine, and a short six-foot turning radius . . . all enable the Model "M" operator to put both tractor and implement just where he wants them. Each track is separately and individually under the operator's control. When both clutches are engaged, full power is applied to both tracks . . . there is no chance of one track standing idle while the other slips in loose footing. Foot brakes can be locked to hold tractor on steep hills or for belt work. Wide or standard tread. New, streamline orchard Model. Send coupon for FREE catalog.

TRACTORS—PLOWS—IMPLEMENT

- Streamline Design ● Better Balance
- Light Weight ● Four Speeds Forward
- More Power ● Gasoline, Kerosene, Distillate, Butane
- Shorter Turning

ALLIS-CHALMERS MFG. CO.

Sept. 16, Tractor Division, Milwaukee, Wis.

Gentlemen: Send FREE catalog on Model "M"; Model "W-K-O" Oil Tractor. I farm _____ acres.

University of Idaho

Town

R.E.D. LIBRARY

MOSCOW — IDAHO

ALLIS-CHALMERS

TRACTOR DIVISION—MILWAUKEE, U. S. A.

Tree Moving Equipment

Williams & Harvey Nurseries Co., Kansas City, Kans.

Weed Hogs

Babcock Mfg. Co., Leonardsville, N.Y.
S. E. McCune & Co., New Waterford, Ohio

Be a McNess Man

No Time Like Now to Get in—

Make up to \$75 a week

It's no trick to make up to \$12 a day when you use your car as a McNess "Store on Wheels." Farmers are buying everything they can from McNess men. Attractive prizes, exciting prizes, also money-saving deals to customers make selling McNess daily necessities a snap. This business is depression-proof.

We Supply Capital—Start Now!

There's no better work anywhere—pays well, permanent, need no experience to start and we supply capital to help you get started quick. You start making money that day. Write at once for McNess Dealer Book—tells all—no obligation. (92-A)

FURST & THOMAS, 485 Adams St., Freeport, Ill.

Use Your CAR to Raise Your PAY

HAIL INSURANCE—FRUIT CROPS

Aetna Insurance Company
World Fire and Marine Insurance Company
Piedmont Fire Insurance Company
Insurance Company of North America
Alliance Insurance Company
Philadelphia Fire and Marine Insurance Company
National Security Fire Insurance Company
Central Fire Insurance Company
Springfield Fire and Marine Insurance Company
Sentinel Fire Insurance Company
Michigan Fire and Marine Insurance Company
New England Fire Insurance Company
Write the HAIL DEPT. of any Company above named.
200 W. Jackson Blvd., Chicago, Ill.



You can save repair bills and add to the efficiency of summer driving if you clean out the rust and scale in your radiator. Sani-Flush does it, for ten cents, in a few minutes.

Just pour some Sani-Flush in the radiator. (Directions on the can.) Run the motor. Drain. Flush. Refill with clean water. A cool-running car has more power, more snap. It doesn't depreciate so fast. Sani-Flush cannot hurt aluminum cylinder heads or motor fittings.

You'll find Sani-Flush in most bathrooms for cleaning toilet bowls. Sold by grocery, drug, hardware, and five-and-ten-cent stores — 25 and 10 cent sizes. The Hygienic Products Company, Canton, Ohio.

Sani-Flush Safe
NOT CAUSTIC
KEEPS RADIATORS CLEAN

ON THE BOARDWALK
The Flanders
Season JUNE 20th to SEPTEMBER 20th
MODERN FIREPROOF
232 rooms with bath and ocean view Open and inclosed sun decks. 3 open air circulating sea water pools. All outdoor sports.
American Plan Low Rates
J. Howard Stowman Manager

OCEAN CITY, N.J.

CHARACTER

Here, one instinctively feels those perfections of hospitality and service that have made The Bellevue famous . . . Rates Begin at \$3.50

BELLEVUE STRATFORD

PHILADELPHIA
One of the few famous hotels in America
CLAUDE H. BENNETT, Gen. Mgr.

IRRIGATION AND DRAINAGE

Explosives

Atlas Powder Co., Wilmington, Del.
E. I. du Pont de Nemours & Co., Wilmington, Del.
Hercules Powder Co., Wilmington, Del.

Hose, Eyelet

B. & B. Irrigating System, Port Clinton, Ohio
Mantle & Mantle, Painesville, Ohio

IRRIGATION PAYS

LAKE ERIE POROUS IRRIGATION HOSE is the new hose that distributes water economically and efficiently to small fruits and vegetables.
LAKE ERIE EYELET HOSE is the real answer to the economical watering of orchards, lawns and fields. It means better fruit at less cost. They are both long lived and treated to withstand decay. Shipped anywhere. Write for literature and prices.

MANTLE & MANTLE PAINESVILLE, OHIO

Fruit growers and orchard supply dealers for more than a quarter century.

Hose, Porous

B. & B. Irrigating System, Port Clinton, Ohio
Buckeye Tent Awning & Mfg. Co., Columbus, Ohio
Crane Co., Chicago, Ill.
Mantle & Mantle, Painesville, Ohio
Oozo, Inc., Howell, Mich.
White Showers, Inc., Detroit, Mich.

Hose, Rubber

Boston Woven & Rubber Hose Co., Cambridge, Mass.
Electric Hose & Rubber Co., Wilmington, Del.
Firestone Tire & Rubber Co., Akron, Ohio
Goodall Rubber Co., Philadelphia, Pa.
B. F. Goodrich Co., Akron, Ohio
Goodyear Tire & Rubber Co., Akron, Ohio
Manhattan Rubber Mfg. Co., Passaic, N.J.
Mercer Rubber Co., Hamilton Square, N.J.
Minor Rubber Co., Inc., Newark, N.J.
Republic Rubber Co., Youngstown, Ohio
B. C. Tillinghast Rubber Co., Philadelphia, Pa.
U. S. Rubber Products, Inc., New York, N.Y.

Piping

W. R. Ames Co., San Francisco, Calif.
A. M. Byers Co., Pittsburgh, Pa.
Champion Corp., Hammond, Ind.
Crane Co., Chicago, Ill.
Dempster Mill Mfg. Co., Beatrice, Nebr.
Flint & Walling Mfg. Co., Kendallville, Ind.
March Automatic Irrigation Co., Muskegon, Mich.
Mid-West Forging Co., Chicago, Ill.
Northwest Irrigation Co., Antigo, Wis.
Parma Water Lifter Co., Parma, Idaho
Skinner Irrigation Co., Troy, Ohio
White Showers, Inc., Detroit, Mich.

IRRIGATE! PORTABLE SURFACE PIPE

Flood, Furrow, or low-pressure Sprinkler.
Describe your problem.
16 page illustrated folder on request.

W. R. AMES CO. 150 Hooper Street
San Francisco, California

MODERNIZE YOUR HOME WITH 1937 MODELS

AUTO-MATIC KEWANEE SELF-OILING
WATER SUPPLY SYSTEMS
AND SEWAGE DISPOSAL PLANTS
WRITE FOR LITERATURE
KEWANEE PRIVATE UTILITIES COMPANY,
KEWANEE, ILLINOIS
BOX F
AMERICAN FRUIT GROWER

Pumps

American Well Works, Aurora, Ill.
John Bean Mfg. Co., Lansing, Mich.
Byron Jackson Co., Pump Div., Berkeley, Calif.

Campbell & Budlong Machine Works, San Jose, Calif.

Challenge Co., Batavia, Ill.

Crane Co., Chicago, Ill.

Dayton-Dowd Co., Quincy, Ill.

Decatur Pump Co., Decatur, Ill.

De Laval Steam Turbine Co., Trenton, N.J.

Deming Co., Salem, Ohio

Dempster Mill Mfg. Co., Beatrice, Nebr.

Domestic Engine & Pump Co., Shippensburg, Pa.

W. & B. Douglas Pump Co., Philadelphia, Pa.

Dultmeier Mfg. Co., Manning, Iowa

Duro Co., Dayton, Ohio

Fairbanks, Morse & Co., Chicago, Ill.

Flint & Walling Mfg. Co., Kendallville, Ind.

Goulds Pumps, Inc., Seneca Falls, N.Y.

Heil Co., Milwaukee, Wis.

Ingersoll-Rand, New York, N.Y.

Kewanee Private Utilities Co., Kewanee, Ill.

March Automatic Irrigation Co., Muskegon, Mich.

F. E. Myers & Bro Co., Ashland, Ohio

Novo Engine Co., Lansing, Mich.

Peerless Pump Co., Massillon, Ohio

United Motors Service, Inc., Detroit, Mich.

Weinman Pump Co., Columbus, Ohio

Witte Engine Works, Kansas City, Mo.

Worthington Pump & Machinery Corp., Harrison, N.J.

Rams, Hydraulic

Deming Co., Salem, Ohio

Dempster Mill Mfg. Co., Beatrice, Nebr.

Goulds Pumps, Inc., Seneca Falls, N.Y.

March Automatic Irrigation Co., Muskegon, Mich.

Rife Hydraulic Engine Mfg. Co., New York, N.Y.

Rife Ram and Pump Wks., Waynesboro, Va.

Overhead Irrigation

It gives you year-round protection against drought and frost. Costs little. Easy to install. Send today for FREE BOOK.

WHITE SHOWERS, Inc.
6482 Dubois St., Detroit, Mich.



Sprinklers, Overhead

Champion Corp., Hammond, Ind.

Crane Co., Chicago, Ill.

March Automatic Irrigation Co., Muskegon, Mich.

Northwest Irrigation Co., Antigo, Wis.

Skinner Irrigation Co., Troy, Ohio

White Showers, Inc., Detroit, Mich.

Valves and Fittings

Central Brass Mfg. Co., Cleveland, Ohio

Crane Co., Chicago, Ill.

Dempster Mill Mfg. Co., Beatrice, Nebr.

B. F. Goodrich Co., Akron, Ohio

March Automatic Irrigation Co., Muskegon, Mich.

F. E. Myers & Bro. Co., Ashland, Ohio

Northwest Irrigation Co., Antigo, Wis.

Oozo, Inc., Howell, Mich.

Rife Hydraulic Engine Mfg. Co., New York, N.Y.

Skinner Irrigation Co., Troy, Ohio

Windmills

Aermotor Co., Chicago, Ill.

Dempster Mill Mfg. Co., Beatrice, Nebr.

Dultmeier Mfg. Co., Manning, Iowa

Elgin Windmill Co., Elgin, Ill.

Fairbanks, Morse & Co., Chicago, Ill.

Flint & Walling Mfg. Co., Kendallville, Ind.

Stover Mfg. & Engine Co., Freeport, Ill.

U.S. Wind Engine Pump Co., Aurora, Ill.

Woodmanse Mfg. Co., Freeport, Ill.

JUNE, 1937

PICKING

Bags

John Bacon, Inc., Gasport, N.Y.
John Bean Mfg. Co., Lansing, Mich.
Cyclone Seeder Co., Urbana, Ind.
Fulton Bag & Cotton Mills, Atlanta, Ga.
Hardie Mfg. Co., Portland, Ore.
Philadelphia Blanket Co., Inc., Philadelphia, Pa.
M. D. Smith Tent & Awning Co., Atlanta, Ga.
The Taylor Grader, Anna, Ill.
Edwin C. Tyson, Flora Dale, Pa.
Wells & Wade, Wenatchee, Wash.



Baskets

John Bacon, Inc., Gasport, N.Y.
Frank L. Deane & Son, Benton Harbor, Mich.
Edgerton Mfg. Co., Plymouth, Ind.
Leigh Banana Case Co., Chicago, Ill.
Edwin C. Tyson, Flora Dale, Pa.

EVERYTHING FOR THE ORCHARD

Wholesale and Retail

Growing and Harvesting Equipment and Supplies

Riding Spring Tools and Disc Harrows, Ladders, Ladles, etc. Trucks, Pickers, Bins, Baskets and Buckets, Orders and Shipping Crates, Wire Pickers, Pickers' Tickets, Barrels, Baskets, Display Containers, etc.

EDWIN C. TYSON, Flora Dale, Pa., U.S.A.

See Ads. Pages 26, 41, 44

Crates, Field

Berlin Fruit Box Co., Berlin Heights, O.
Frank L. Deane & Son, Benton Harbor, Mich.
General Box Co., Chicago, Ill.
Marietta Fruit Package & Lumber Co., Marietta, Ohio
Marinette & Menominee Box Co., Marinette, Wis.
Mell Lumber Co., Philadelphia, Pa.
New England Box Co., New York, N.Y.
Paducah Box & Basket Co., Paducah, Ky.
Rathborne, Hair & Ridgway Co., Chicago, Ill.
Smede Box Co., Cleveland, Ohio

Ladders

John Bacon, Inc., Gasport, N.Y.
Bauer Mfg. Co., Wooster, Ohio
Goshen Churn & Ladder Co., Goshen, Ind.
Inland Mfg. Co., Oakland, Calif.
Michigan Ladder Co., Ypsilanti, Mich.
Fre Patton, Jewett, Ohio
Rich Pump & Ladder Co., Cincinnati, O.
Safety Ladder Co., E. Hartford, Conn.
Edwin C. Tyson, Flora Dale, Pa.
Zoss Ladder Works, Portland, Ore.

LADDERS FOR FRUIT PICKING

Direct from
Factory to You

BAUER Ladders for every purpose are famous for quality. Special designs for fruit pickers have important construction features, such as Countersunk Rungs and Double-Dipped Tenons, making them stronger and last longer. Write for prices and complete information.

Bauer Mfg. Co.
Wooster, Ohio



JUNE, 1937

This FREE Big BOOK Shows FINE FRUITS SHRUBS ROSES

Burbank's July Elberta Peach
Hundreds of Stark's Marvelous New & U.S. Patent Fruits and Plants are pictured in Gorgeous Colors in Stark's NEW FREE Prize Fruit Book. Nearly 1000 Stark Varieties—300 true-to-life illustrations by Color photo. Among them are GOLDEN DELICIOUS APPLE, Queen of luscious Quality and Young and Heavy Bearing—STARKING (Double-Red Delicious) King of Red Apples—JONA-A-RED, New Stark U.S. Patent Double-Red Jonathan shown for first time—a sensation—coloring solid red all-over weeks earlier. Also shown are the huge HALBERTA GIANT PEACH (World's first Patented Peach)—Burbank's July ELBERTA PEACH—Burbank's ELEPHANT HEART PLUM, World's finest Blood-fleshed Freestone—Burbank's GREAT YELLOW PLUM (New Patent) Largest, Sweetest Solid Gold Plum—New Black GIANT CHERRIES, gigantic size, exquisitely sweet and delicious.

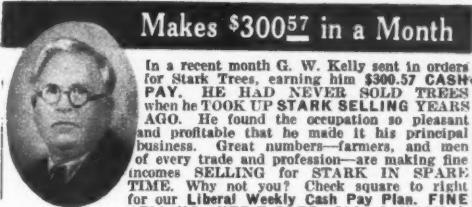
TWO Big Books In One—FRUITS and ORNAMENTALS

In addition to wonderful exclusive fruit varieties sold ONLY by Stark Bro's, this book is packed with fine Shrubs—Roses and Ornamental Plants of every description—shown in bloom in beautiful, glowing Colors. This great NEW Book cost over \$50,000 to produce—it GIVES YOU the results of over a century of expert horticultural experience of Stark Bro's in the development of hardy, HEAVY-BEARING FRUIT VARIETIES and the most exquisite SHRUBS—ROSES and ORNAMENTAL PLANTS.

STARK BRO'S NURSERIES

BOX 89, LOUISIANA, MO.

Largest in the World - Oldest in America



GET FREE TREES OFFER also FREE HOME ORCHARD PLANTING PLANS
Send Coupon—get our amazing offer of free trees to every buyer—also valuable Free Guide to planting.

Fruit Experts will gladly help you select Biggest money-making varieties for your sec-

Check circle for Farm—Home Landscape Plans Free to Customers.



Send FREE PLANTING PLANS and 1937 Prize Fruit Book. I may plant... (Number)

Trees, Shrubs, Roses.

Check circle for Landscape Plans for Farm Homes.

Name _____

St. or R.F.D. MOSCOW IDAHO

LIBRARY

P.O. Box 89

Check here for FREE full details of NEW, EXTRA-GENEROUS Salesmen's Weekly PAY-PLAN for Spare Time Selling

NURSERY STOCK

A complete directory of fruit varieties is too extensive to be included here. A special Nursery and Fall Planting Guide will therefore be issued next October. It will contain a complete list of varieties, seeds and planting supplies.

ORCHARD INSTRUMENTS

Hydrometers

Eimer & Amend, New York, N.Y.
Fleischhauer, Fr., & Son, Hollis, N.Y.
H-B Instrument Co., Philadelphia, Pa.
E. W. Schultheis, Brooklyn, N.Y.
Taylor Instrument Co., Rochester, N.Y.

Soil Testing Outfits

Edwards Laboratory, Lansing, Mich.
Sudbury Soil Testing Laboratory, Sudbury, Mass.

"HOW'S YOUR SOIL?"

Be sure your soil contains the proper elements for vigorous growth. You can make your own soil analysis with a Simplex Soil Test Outfit. This is a complete, practical outfit for the accurate chemical diagnosis of soil needs. Developed from soil testing system of Michigan State College. Complete instructions with each outfit. Write for our descriptive folder.

THE EDWARDS LABORATORY, LANSING, MICHIGAN
AMERICAN FRUIT GROWER

Testers, Fruit Pressure

D. Ballauf Mfg. Co., Washington, D.C.
John Chattilon & Sons, New York, N.Y.
H-B Instrument Co., Philadelphia, Pa.
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

Thermometers

Bristol Co., Waterbury, Conn.
Eimer & Amend, New York, N.Y.
Fleischhauer, Fr., & Son, Hollis, N.Y.
H-B Instrument Co., Philadelphia, Pa.
Taylor Instrument Co., Rochester, N.Y.

DOUBLE H-B DIAMOND DEPENDABLE ORCHARD MINIMUM THERMOMETERS APPROVED TYPE

Also Fruit Test Thermometers
H-B INSTRUMENT CO., INC.
2517 North Broad Street,
Philadelphia, Pa.

PAGE 39

PACKAGES AND PACKAGING

Caps, Corrugated

John Bacon, Inc., Gasport, N.Y.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
Hinde & Dauch Paper Co., Sandusky, O.
Rice, Trew & Rice Co., Biglerville, Pa.
Simplex Paper Corp., Adrian, Mich.
Sutherland Paper Co., Kalamazoo, Mich.
Edwin C. Tyson, Flora Dale, Pa.

Containers

BAGS, CLOTH

Bemis Bro. Bag Co., St. Louis, Mo.
Chase Bag Co., Cleveland, Ohio
Fulton Bag & Cotton Mills, Atlanta, Ga.

BAGS, OPEN MESH

Bemis Bro. Bag Co., St. Louis, Mo.
Chase Bag Co., Cleveland, Ohio
Fulton Bag & Cotton Mills, Atlanta, Ga.

BAGS, PAPER

Bemis Bro. Bag Co., St. Louis, Mo.
Chase Bag Co., Cleveland, Ohio
Fulton Bag & Cotton Mills, Atlanta, Ga.

BASKETS, CORRUGATED

Ashtabula Corrugated Box Co., Ashtabula, Ohio
Container Corp. of America, Chicago, Ill.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
Hankins Container Co., Cleveland, Ohio

BASKETS, FIBER

John Bacon, Inc., Gasport, N.Y.
Container Corp. of America, Chicago, Ill.
Robert Gair Co., Inc., New York, N.Y.
Kieckhefer Container Co., Delair, N.J.
Pioneer Paper Stock Co., Chicago, Ill.
Fred C. Strype, New York, N.Y.
Edwin C. Tyson, Flora Dale, Pa.

BOX SHOOTS

Chicago Mill & Lumber Co., Chicago, Ill.
Mell Lumber Co., Philadelphia, Pa.
New England Box Co., New York, N.Y.
Spruce Veneer Package Corp., Puyallup, Wash.

BOXES, BERRY

Berlin Fruit Box Co., Berlin Heights, O.
H. A. Du Bois & Sons, Inc., Cobden, Ill.
F. W. Harrison & Son, Painesville, Ohio
New Albany Box & Basket Co., New Albany, Ind.
Paducah Box & Basket Co., Paducah, Ky.
Rollrim Box Co., Benton Harbor, Mich.
Spruce Veneer Package Corp., Puyallup, Wash.
Edwin C. Tyson, Flora Dale, Pa.

BOXES, CORRUGATED

Ashtabula Corrugated Box Co., Ashtabula, Ohio
Baltimore Paper Box Co., Baltimore, Md.
Bird & Son, Inc., E. Walpole, Mass.
Container Corp. of America, Chicago, Ill.
Corrugated Container Co., Columbus, Ohio
Fruit & Produce Packing, Inc., Indianapolis, Ind.

Robert Gair Co., Inc., New York, N.Y.
Hankins Container Co., Cleveland, Ohio
Hinde & Dauch Paper Co., Sandusky, O.
Owens-Illinois Pacific Coast Co., San Francisco, Calif.
Pioneer Paper Stock Co., Chicago, Ill.
B. G. Pratt Co., New York, N.Y.
Simplex Paper Corp., Adrian, Mich.

BOXES, FIBER

Baltimore Paper Box Co., Baltimore, Md.
Bird & Son, Inc., E. Walpole, Mass.
Container Corp. of America, Chicago, Ill.
Evansville Container Co., Evansville, Ind.
Fruit & Produce Packing, Inc., Indianapolis, Ind.

Robert Gair Co., Inc., New York, N.Y.
Hinde & Dauch Paper Co., Sandusky, O.
Pioneer Paper Stock Co., Chicago, Ill.
Rollrim Box Co., Benton Harbor, Mich.
Fred C. Strype, New York, N.Y.

BOXES, PAPER

Robert Gair Co., Inc., New York, N.Y.
Pioneer Paper Stock Co., Chicago, Ill.
Fred C. Strype, New York, N.Y.
Sutherland Paper Co., Kalamazoo, Mich.
Wolverine Carton Co., Grand Rapids, Mich.

BOXES, WINDOW

Robert Gair Co., Piermont, N.Y.
Sutherland Paper Co., Kalamazoo, Mich.

BOXES, WOOD

Barden & Robeson Corp., Penn Yan, N.Y.
Chicago Mill & Lumber Co., Chicago, Ill.
H. A. Du Bois & Sons, Inc., Cobden, Ill.
Evans Products Co., Detroit, Mich.
Evansville Container Corp., Evansville, Ind.

General Box Co., Chicago, Ill.
Mell Lumber Co., Philadelphia, Pa.
New Albany Box & Basket Co., New Albany, Ind.
New England Box Co., New York, N.Y.
Rathborne, Hair & Ridgway Co., Chicago, Ill.
Smeed Box Co., Cleveland, Ohio
Spruce Veneer Package Corp., Puyallup, Wash.

CRATES, CORRUGATED BERRY

Ashtabula Corrugated Box Co., Ashtabula, Ohio
Hinde & Dauch Paper Co., Sandusky, O.
B. G. Pratt Co., New York, N.Y.

CRATES, WOOD

John Bacon, Inc., Gasport, N.Y.
Berlin Fruit Box Co., Berlin Heights, O.
Chicago Mill & Lumber Co., Chicago, Ill.
Frank L. Deaner & Son, Benton Harbor, Mich.

Evans Products Co., Detroit, Mich.
Evansville Basket & Crate Co., Evansville, Ind.

General Box Co., Chicago, Ill.
Marietta Fruit Package & Lumber Co., Marietta, Ohio

Marinette & Menominee Box Co., Marinette, Wis.

Mell Lumber Co., Philadelphia, Pa.
New England Box Co., New York, N.Y.
Paducah Box & Basket Co., Paducah, Ky.
Fre Patton, Jewett, Ohio
Rathborne, Hair & Ridgway Co., Chicago, Ill.

Roberts-Liggett Co., Metropolis, Ill.
Rooks Mfg. Co., Humboldt, Tenn.
Smeed Box Co., Cleveland, Ohio
Spruce Veneer Package Corp., Puyallup, Wash.

MELLWOOD BRAND WHITE PINE

APPLE BOXES

FIELD CRATES

W. P., Y. P., HARDWOODS
(CARLOTS ONLY)

MELL LUMBER CO.

4036 Spruce St.
PHILADELPHIA, PA.

Pack Your Apples in the Approved NEW ENGLAND APPLE BOX

Easily stacked. Saves storage space.
Commission merchants prefer them.

Manufactured by
THE SMEED BOX COMPANY
1878 SCRANTON ROAD,
CLEVELAND, OHIO

General Boxes



This Gift Box (nailed) and the Wire-bound Type pioneered box packing of apples. Take up less space in trucks and storage. Lower storage costs because of space saving and quicker cooling. Also used as orchard picking crate. Write for prices.

GENERAL BOX COMPANY

Brooklyn -:- Cincinnati -:- Sheboygan -:- Chicago
East St. Louis -:- Louisville -:- Kansas City
Minneapolis -:- Winchendon -:- Milwaukee -:- Dallas
New Orleans -:- Detroit -:- Houston

JUNE, 1937

Fruit Growers... Repackers

SEND FOR
COMPLETE
INFORMA-
TION

HANKINS
FRUIT AND
VEGETABLE
BASKETS . . .
2-4 & 8 QUART
SIZES



THE HANKINS CONTAINER COMPANY
3044 WEST 106th STREET
CLEVELAND, OHIO

PACKAGES AND PACKAGING

Cushions

John Bacon, Inc., Gasport, N.Y.
Continental Paper Products Co., Denver, Colo.
Edgerton Mfg. Co., Plymouth, Ind.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
B. F. Goodrich Co., Akron, Ohio
Hinde & Dauch Paper Co., Sandusky, O.
Rice, Trew & Rice Co., Biglerville, Pa.
Simplex Paper Corp., Adrian, Mich.
Fred C. Strype, New York, N.Y.
Sutherland Paper Co., Kalamazoo, Mich.
Edwin C. Tyson, Flora Dale, Pa.

Fringes

Continental Paper Products Co., Denver, Colo.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
Pioneer Paper Stock Co., Chicago, Ill.
Rice, Trew & Rice Co., Biglerville, Pa.
Sutherland Paper Co., Kalamazoo, Mich.
Wolverine Carton Co., Grand Rapids, Mich.

Labels

Epsen Lithographing Co., Omaha, Nebr.
Gamse Lithographing Co., Inc., Baltimore, Md.
A. Hoen & Co., Baltimore, Md.
A. B. Morse Co., St. Joseph, Mich.
Reynolds & Reynolds Co., Dayton, Ohio
St. Louis Sticker Co., St. Louis, Mo.
United States Printing & Lithograph Co., Cincinnati, Ohio

Liners

John Bacon, Inc., Gasport, N.Y.
Carpenter-Hiatt Sales Co., Indianapolis, Ind.
Clark Stek-O Corp., Rochester, N.Y.
Continental Paper Products Co., Denver, Colo.
Frank L. Deane & Son, Benton Harbor, Mich.
Edgerton Mfg. Co., Plymouth, Ind.
Evansville Basket & Crate Co., Evansville, Ind.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
Pioneer Paper Stock Co., Chicago, Ill.
F. A. Read, Inc., Albion, N.Y.
Rice, Trew & Rice Co., Biglerville, Pa.
Simplex Paper Corp., Adrian, Mich.
Fred C. Strype, New York, N.Y.
Sutherland Paper Co., Kalamazoo, Mich.
Edwin C. Tyson, Flora Dale, Pa.

EVERYTHING FOR THE ORCHARD

Wholesale and Retail

FRUIT PACKING EQUIPMENT and SUPPLIES
Conveyors, Graders, Washers, Drapers, Polishers, Washing Chemicals, Caps, Liners, Cushions, Wraps, Shredded Oil Paper, Basket Turners, Jiffy Lidders, Barrel Presses, Nails, Hatchets, Stencils, Stamps, Ink, Paste, Nail Strippers, Sizing Rings, Labels, and Paste, Cider Presses and Containers, Apple Butter Cookers.

EDWIN C. TYSON, Flora Dale, Pa., U. S. A.
See Ads. Pages 26, 39, 44

The Standard Paper Packaging Line

The Standard 66-Green Stripe Basket Caps

Hiatt Basket Liners

Crystal Shredded Oiled Tissue—Fruit Wraps—Cushions
Corrugated Baskets and Boxes—Fringes
Tree Bands—Box Liners—Other Specialties

FRUIT & PRODUCE PACKING, INC.

700 W. Morris St.

Indianapolis, Indiana

Fruit Growers' Supplies

MANUFACTURER: Baskets, Ladders, Picking Bags, Tree Bands, Grafting Materials, Tanks, Liners and Cushions.

JOBBER: Sprayers and Fittings, Bellows Dusters, Hose and Guns, Insecticides, Pruning Equipment, Filbloc Apple Boxes.

JOHN BACON INC., GASPORT, N.Y.

JUNE, 1937

Paper, Shredded Oiled

John Bacon, Inc., Gasport, N.Y.
Continental Paper Products Co., Denver, Colo.
Diamond-T-Waxed Paper Corp., Chicago, Ill.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
Rice, Trew & Rice Co., Biglerville, Pa.
Fred C. Strype, New York, N.Y.
Edwin C. Tyson, Flora Dale, Pa.

Paper, Shredded Plain

Brooks Paper Co., St. Louis, Mo.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
Pioneer Paper Stock Co., Chicago, Ill.
Fred C. Strype, New York, N.Y.

Paper, Shredded Transparent

Brooks Paper Co., St. Louis, Mo.
Sylvania Industrial Corp., New York, N.Y.

Stamping Inks

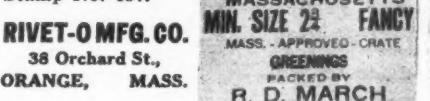
Marsh & Co., New York, N.Y.
Rivet-O Mfg. Co., Orange, Mass.

Stamps, Rubber

Jas. H. Matthews & Co., Pittsburgh, Pa.
J. L. May Co., New York, N.Y.
Rivet-O Mfg. Co., Orange, Mass.

Speed Up Your Marking With

Special SPEED-MO FRUIT GROWERS logotype rubber stamps especially designed for marking fruit packages. Complete in one unit having interchangeable logotypes for size, grade and brand. Unnecessary to buy separate rubber stamps. The new SPEED-MO logotype rubber stamps will speed up your marking 200%. Send for our descriptive folder on Fruit Growers Stamp No. 437.



Wrappers, Oiled

Fruit & Produce Packing, Inc., Indianapolis, Ind.
Pioneer Paper Stock Co., Chicago, Ill.
Fred C. Strype, New York, N.Y.

Wrappers, Plain

Fruit & Produce Packing, Inc., Indianapolis, Ind.
United Paper Co., Tampa, Fla.
Wolf River Paper & Fiber Co., Shawano, Wis.

Wrappers, Transparent

Brooks Paper Co., St. Louis, Mo.
H. D. Catty, Franz Euler Co., New York, N.Y.
E. I. du Pont de Nemours & Co., Inc., "Cellophane" Div., Wilmington, Del.
Eastman Kodak Co., Rochester, N.Y.
Goodyear Tire & Rubber Co., Akron, O.
Fred C. Strype, New York, N.Y.
Sylvania Industrial Corp., New York, N.Y.
Zellerbach Paper Co., San Francisco, Calif.

Wrappers, Transparent Printed Sheets and Bags

Dobeckmun Co., Cleveland, Ohio
Milprint Products Corp., Milwaukee, Wis.
Shellmar Products Co., Chicago, Ill.
Traver Corp., Chicago, Ill.
Zellerbach Paper Co., San Francisco, Calif.

AMERICAN FRUIT GROWER

MORE SALES MORE PROFIT...

With Hoods and Wraps of "Cellophane"



If you are a grower of:

Apples	Grapefruit
Avocados	Limes
Berries	Melons
Cherries	Oranges
Dates	Peaches
Figs	Plums
Grapes	

... there is some interesting information for you in our files regarding the successful and economical use of "Cellophane" cellulose film by many other growers.

Write today. Let us tell you how this modern protection and merchandising aid can be easily applied to your business. No obligation.

Dept. JP, "Cellophane" Division,
DuPont, Wilmington, Delaware.

Cellophane

TRADE MARK



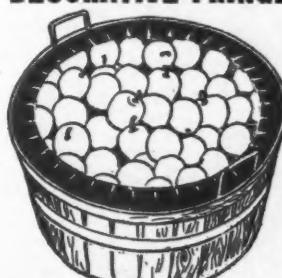
"Cellophane" is a trade-mark of E. I. du Pont de Nemours & Co., Inc.

SUNSET SHREDDED OILED PAPER SUNSET OILED APPLE AND PEAR WRAPS

Sunset Brand Oiled Copper Wraps and Fruit and Vegetable Wraps; liners and pads of all types.

Fred C. Strype, 103 Lafayette St., New York, N.Y.

FRUIT PACKED WITH DECORATIVE FRINGE

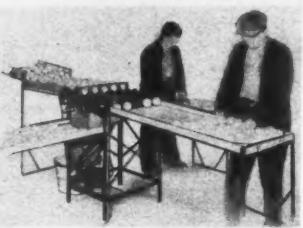


COMMANDS BETTER PRICES

For samples and quotations

WRITE
WOLVERINE CARTON CO.
Grand Rapids, Mich.

PAGE 41



BUTLER "SIMPLEX" GRADER NO BRUISING!

For sizing apples, peaches, round potatoes, onions, tomatoes. All-metal—no wood to warp or repaint. Fruit is handled by soft rubber cups and sizing rings. Changeable rings divide fruit into any 4 of 7 sizes. Capacity as high as 70 bu. per hour.

4 models—Gasoline, Electric, Hand-Crank and Without Power ready for own power unit. Complete, ready to start work. Nothing to build or assemble.

When operating requires floor space 10x12 ft. When not in use, folds to 4 sq. ft. Priced within reach of all. Nothing like it on the market.

*Territory Open for Salesmen and Dealers.
Write for Circulars*

BUTLER MFG. CO., Bell Bldg., CHICAGO

WAYLAND

The World's Finest Cleaning and Grading Machinery for APPLES—PEACHES—TOMATOES

Dependable
Accurate
Fast

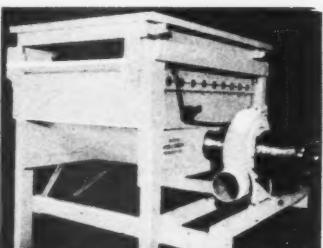
Free from bruise
Silent Running

Exceptionally fine steel
construction

For Packing Barrels, Boxes,
Bushels and Cartons

A size for every user

Wayland Machinery Company
Covesville, Virginia



PEACH AND APPLE BRUSER
Removes fuzz from peaches, dirt from any size fruit or vegetable, polishes apples. Ball bearing machines, all brushes revolve. Small power consumption—less than 1000 watts gasoline or electric driven, less cost—200 to 500 bushels per hr. Hundreds of these machines now in use. Write for bulletin.

FRED A. DURAND Woodbury, Georgia

1000 BUSHELS A DAY

Growers using compact, sturdy Taylor apple grader report that it will grade more than 1000 bushels a day. And the cost of this efficient, bruise-preventing grader is only \$95.00. We also manufacture peach graders, sorting chutes, picking bags and fruit pack-shapers. Write for information to:

The TAYLOR GRADER, Anna, Ill.

PACKING HOUSE EQUIPMENT

Cleaners and Polishers

George G. Bates, Kingston, N.Y.
John Bean Mfg. Co., Lansing, Mich.
Fred A. Durand, Woodbury, Ga.
J. D. Grabill, Woodstock, Va.
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Trescott Co., Inc., Fairport, N.Y.
Edwin C. Tyson, Flora Dale, Pa.
Wayland Machinery Co., Inc., Covesville,
Va.

Conveyors

John Bean Mfg. Co., Lansing, Mich.
Brogdex Co., Wenatchee, Wash.
Fred A. Durand, Woodbury, Ga.
A. B. Farquhar Co., Ltd., York, Pa.
Ideal Grader & Nursery Co., Hood River,
Ore.
Jeffrey Mfg. Co., Columbus, Ohio
Link-Belt Co., Chicago, Ill.
Mathews Conveyor Co., Ellwood City, Pa.
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Parma Water Lifter Co., Parma, Idaho
Standard Conveyor Co., N. St. Paul, Minn.
Trescott Co., Inc., Fairport, N.Y.
Edwin C. Tyson, Flora Dale, Pa.
Wayland Machinery Co., Inc., Covesville,
Va.

Ethylene and Ripening Outfits

Carbide & Carbon Chemicals Corp., New
York, N.Y.
Ohio Chemical & Mfg. Co., Cleveland, Ohio

Facers, Basket

Continental Paper Products Co., Denver,
Colo.
Fruit & Produce Packing, Inc., Indianapolis,
Ind.
B. F. Goodrich Co., Akron, Ohio
Hauber Cooperage Co., Kansas City, Kans.
A. H. Phillips Mfg. Co., Hulberton, N.Y.
Rice, Trew & Rice Co., Inc., Biglerville, Pa.
Simplex Paper Corp., Adrian, Mich.

Fly Papers and Ribbons

Excelsior Fly Paper Mills, Chicago, Ill.
Tanglefoot Co., Grand Rapids, Mich.

Fly Sprays

Gulf Oil Corp. of Pa., Pittsburgh, Pa.
Lanair Co., Inc., Chicago, Ill.
Sinclair Refining Co., New York, N.Y.
Stanco, Inc., New York, N.Y.
Standard Oil Co. of Ohio, Cleveland, Ohio
Tanglefoot Co., Grand Rapids, Mich.

Graders and Sizers

George G. Bates, Kingston, N.Y.
John Bean Mfg. Co., Lansing, Mich.
Brogdex Co., Wenatchee, Wash.
Butler Mfg. Co., Chicago, Ill.
Cutler Mfg. Co., Portland, Ore.
Fred A. Durand, Woodbury, Ga.
J. D. Grabill, Woodstock, Va.
Ideal Grader & Nursery Co., Hood River,
Ore.
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Parma Water Lifter Co., Parma, Idaho
The Taylor Grader, Anna, Ill.
Trescott Co., Inc., Fairport, N.Y.
Edwin C. Tyson, Flora Dale, Pa.
Wayland Machinery Co., Inc., Covesville,
Va.

Packing Forms

Clark Stek-O Corp., Rochester, N.Y.
Continental Paper Products Co., Denver,
Colo.
Frank L. Deane & Son, Benton Harbor,
Mich.
Fruit & Produce Packing, Inc., Indianapolis,
Ind.
The Taylor Grader, Anna, Ill.
Edwin C. Tyson, Flora Dale, Pa.

Ripening Outfits, Ethylene

Carbide & Carbon Chemicals Corp., New
York, N.Y.
Ohio Chemical & Mfg. Co., Cleveland, O.

Saw Mills

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Buller Coupler Co., Hillsboro, Kans.
Fairbanks, Morse & Co., Chicago, Ill.
A. B. Farquhar Co., Ltd., York, Pa.
Frick Co., Inc., Waynesboro, Pa.
Novo Engine Co., Lansing, Mich.
Port Huron Thresher & Implement Co.,
Port Huron, Mich.
Standard Saw Mill Machinery Co., Erie,
Pa.
Stover Mfg. & Engine Co., Freeport, Ill.
Witte Engine Works, Kansas City, Mo.

Sorting Tables, Fruit

John Bean Mfg. Co., Lansing, Mich.
Brogdex Co., Wenatchee, Wash.
Cutler Mfg. Co., Portland, Ore.
Fred A. Durand, Woodbury, Ga.
Ideal Grader & Nursery Co., Hood River,
Ore.
Niagara Sprayer & Chemical Co., Inc.,
Middleport, N.Y.
Parma Water Lifter Co., Parma, Idaho
The Taylor Grader, Anna, Ill.
Wayland Machinery Co., Inc., Covesville,
Va.

Sponge Rubber Sheeting

Faultless Rubber Co., Mansfield, Ohio
Sponge Rubber Products Co., Derby, Conn.

Staplers and Stitchers

Cobden Machine Works, Cobden, Ill.
William S. Doig, Inc., Brooklyn, N.Y.
Fruit & Produce Packing, Inc., Indianapolis, Ind.
General Food Package Equipment Corp.,
Benton Harbor, Mich.
Heller Co., Cleveland, Ohio
Markwell Mfg. Co., Inc., New York, N.Y.

Staples

Fruit & Produce Packing, Inc., Indianapolis, Ind.
Markwell Mfg. Co., Inc., New York, N.Y.
Edwin C. Tyson, Flora Dale, Pa.

Turners, Basket

John Bean Mfg. Co., Lansing, Mich.
Continental Paper Products Co., Denver,
Colo.
Fruit Packing Equipment Co., Inc.,
Swoope, Va.
Parma Water Lifter Co., Parma, Idaho
Trescott Co., Inc., Fairport, N.Y.

Washers, Fruit

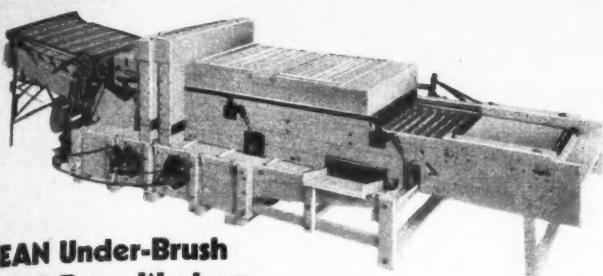
John Bean Mfg. Co., Lansing, Mich.
Brogdex Co., Wenatchee, Wash.
Cutler Mfg. Co., Portland, Ore.
Ideal Grader & Nursery Co., Hood River,
Ore.
Parma Water Lifter Co., Parma, Idaho
Edwin C. Tyson, Flora Dale, Pa.
Wayland Machinery Co., Inc., Covesville,
Va.

Washing Compounds, Fruit

American Colloid Co., Chicago, Ill.
American Cyanamid & Chemical Corp.,
Insecticide Dept., New York, N.Y.
E. I. du Pont de Nemours & Co., Inc., Grasse
Chemical Co., Wilmington, Del.
General Chemical Co., New York, N.Y.
Mallinckrodt Chem. Wks., St. Louis, Mo.
Mechling Bros. Chemical Co., Camden, N.J.
Monsanto Chemical Co., Rubber Service
Laboratories Div., Akron, Ohio
National Oil Products Co., Harrison, N.J.
Philadelphia Quartz Co., Philadelphia, Pa.
Tennessee Eastman Corp., Kingsport,
Tenn.

BEAN

A Profit Protection Service
...for Growers



BEAN Under-Brush Flood-Type Washers

Washed fruit not only complies with tolerance requirements, but its bright, clean appearance builds up better sales at better prices. Illustrated is the BEAN Under-Brush Washer, the most advanced washing equipment on the market. We build washers to meet all requirements. Write for complete information.



BEAN Fruit and Potato Cleaners

Various kinds of fruit and vegetables can be cleaned to advantage. BEAN 2-Way Cleaners clean with brushes and polish with cloths. Three sizes. Write for full details on these money-making cleaners.

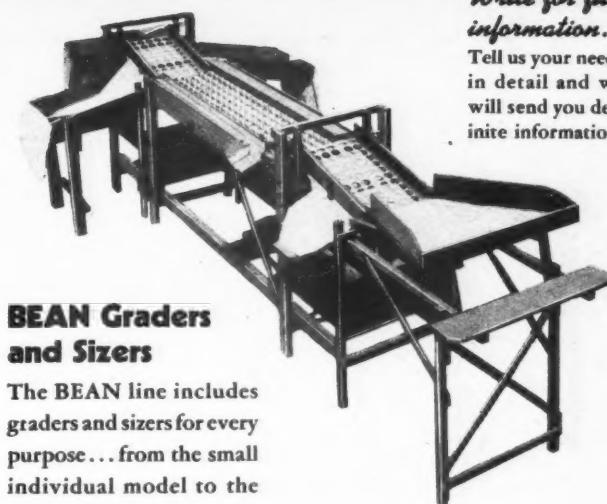


BEAN 'Royal' Armored Sprayers

All steel from end to end, including corrosion-proofed steel tank. Full range of sizes. Can be equipped with pneumatic tires, steel wheels, or without wheels for mounting on your own truck. Write.

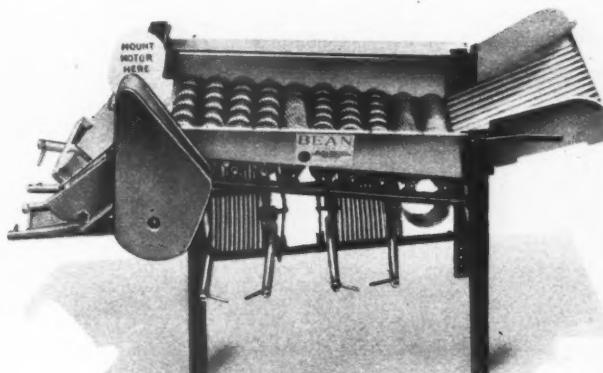
JOHN BEAN MFG. CO.
Lansing, Mich.
San Jose, Calif.

SEND THE
COUPON!



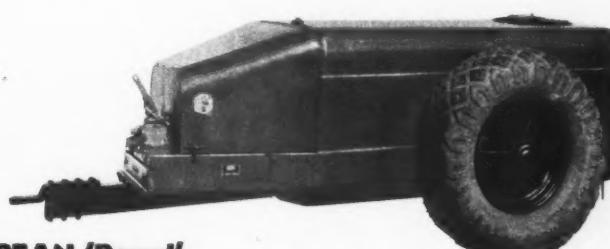
BEAN Graders and Sizers

The BEAN line includes graders and sizers for every purpose... from the small individual model to the large packing house size.



BEAN Rubber Spool Potato Graders

Grades & cleans entirely on rubber. Small, light, compact. Does a better job, and handles the potatoes without injury. Write us at once for further information.



BEAN 'Royal' Tractor Power Take-off Sprayers

BEAN Armored Tractor Sprayers are built in a wide range of pump and tank capacities. All-enclosed as shown. Equipped with steel wheels or pneumatic tires. • Two-speed transmission, if desired.

JOHN BEAN MFG. CO.

15 Homer Street, Lansing, Michigan
West of Rockies write to 104 W. Julian St., San Jose, Calif.

GENTLEMEN: I am interested in
for _____

NAME _____

R. F. D. or Street
AMERICAN FRUIT GROWER

University of Idaho

LIBRARY
MOSCOW State

IDAHO



**CLEAN CUTS
that
HEAL QUICKLY
with the
PORTER
POINTCUT PRUNER**

No damage to bark, because both blades have sharp cutting edges. Blades can be placed close against the main branch, where the cut should be made.

POINTCUT is the perfect all-purpose pruner. Cuts sucker or sprouts on the POINT, with minimum handle-opening. Cuts tough branches up to $1\frac{1}{2}$ " in the THROAT. The SPUR on upper blade supports lower blade; resists the tendency to cross edges. The patented slide-shift gives a 50% to 100% increase in power when needed.

The ideal pruner for fruit, nursery and general horticultural work; particularly useful in apple orchard renovation. Sells for \$5.00.

If your dealer cannot supply, order direct from us, or write for circular FP6 FORESTER brush cutting and lopping shears and the new pole pruner.

H. K. PORTER, Inc.
EVERETT, MASS.

FOR FINER FRUIT



WISS
PRUNERS
LOPPING SHEARS
THINNING SHEARS
A Pruner for Every Purse and Purpose
Write for Full Particulars
Famous for Quality Since 1848
J. Wiss & Sons Co. NEWARK, N.J.

GET MORE FRUIT *
by PROPER PRUNING**

"Snap-Cut" PRUNERS
MAKE PRUNING EASY!
Light weight, handy size—chromed
finish, non-patching handles—
strong, durable, easy cutting.
No. 118—8" long—cuts $\frac{1}{4}$ " branch \$2.00
No. 118—6" long—Lodder size \$1.50
At your dealer or postpaid—money back
guarantee. **FREE CIRCULAR.**
THIS BOOKLET TELLS HOW →
SEYMOUR SMITH & SON, INC.
66 Main St., Oakville, Conn.

EVERYTHING FOR THE ORCHARD
Wholesale and Retail
PRUNING, GRAFTING and BUDDING TOOLS
Knives, Saws, Shears, Hand and Pole Pruners, Jones Patch Budders, Waxers, Merrifield & Clark Wax Melters, Raffia, Rubber Budding Strips, Medicated Creams & J. Nursery Tape, Tree Seal, Tree Kote, Ladders, Chisels, etc.
EDWIN C. TYSON, Flora Dale, Pa., U.S.A.
See Ads. Pages 26, 39, 41



BARTLETT PRUNERS Bring Results
Send for complete Catalog No. 23
BARTLETT MFG. CO. Detroit, Mich.

PRUNING AND GRAFTING

Budding Strips and Tape

Bartlett Mfg. Co., Detroit, Mich.
Firestone Tire & Rubber Co., Akron, Ohio
B. F. Goodrich Co., Akron, Ohio
Goodyear Tire & Rubber Co., Akron, Ohio
Johnson & Johnson, New Brunswick, N.J.
Thomas B. Meehan Co., Dresher, Pa.
Menasha Products Co., Menasha, Wis.
The Revolite Corp., New Brunswick, N.J.
Edwin C. Tyson, Flora Dale, Pa.
U. S. Rubber Products, Inc., New York,
N. Y.

Grafting Compounds

M. C. Almes, Cuyahoga Falls, Ohio
Bartlett Mfg. Co., Detroit, Mich.
Clarion Development Co., Clarion, Pa.
Flintkote Co., New York, N.Y.
Joseph A. Fraim Co., Inc., Norfolk, Va.
Sherwin-Williams Co., Cleveland, Ohio
Southport Paint Co., Inc., Savannah, Ga.
Rollin H. Tabor, Mt. Vernon, Ohio
Edwin C. Tyson, Flora Dale, Pa.

John Bacon, Inc., Gasport, N.Y.
Bartlett Mfg. Co., Detroit, Mich.
Clarion Development Co., Inc., Clarion, Pa.
M. H. Hunt & Son, Lansing, Mich.
Rollin H. Tabor, Mt. Vernon, Ohio
Edwin C. Tyson, Flora Dale, Pa.
A. G. Woodman Co., Grand Rapids, Mich.

Wound Dressings

M. C. Almes, Cuyahoga Falls, Ohio
Bartlett Mfg. Co., Detroit, Mich.
Clarion Development Co., Clarion, Pa.
Flintkote Co., New York, N.Y.
Joseph A. Fraim Co., Inc., Norfolk, Va.
Sherwin-Williams Co., Cleveland, Ohio
Southport Paint Co., Inc., Savannah, Ga.
Rollin H. Tabor, Mt. Vernon, Ohio
Edwin C. Tyson, Flora Dale, Pa.

GRAFTWAX—TREE HEALANT Heals pruned stabs, diseases, blights, wounds. Water proof, adhesive. Exoids in grafting. Hastens union of stock and scion. **SMEARED ON COLD.** Scions dipped in melted Graftwax keep indefinitely, preventing grafting diseases. **CUTTING TREE CAVITY FILM.** **GRAFTWAX SEALS AND HEALS.** 12 oz can, 50c. 3 to 6 lbs, 50c lb. 12 lbs., \$5.00 Postpaid. Free Sample. CLARION DEVELOPMENT COMPANY, INC., Dept. A, Clarion, Pa.

Protect Tree Wounds WITH

SA-VA-TREE

The Pruning Paint
That lasts until wounds have healed.
Growers, Distributors and others who may
be interested are invited to write
for free literature and prices

Southport Paint Co., Inc.
Division of Wesson Oil & Snowdrift Co., Inc.
Savannah, Georgia

Knives

John Bacon, Inc., Gasport, N.Y.
Bartlett Mfg. Co., Detroit, Mich.
Walter E. Clark & Son, Milford, Conn.
Henry Disston & Sons, Philadelphia, Pa.
Remington Arms Co., Bridgeport, Conn.
Carroll R. Tiffany, Conklin, N.Y.
Edwin C. Tyson, Flora Dale, Pa.

Lanterns, Grafting

M. H. Hunt & Son, Lansing, Mich.
A. G. Woodman Co., Grand Rapids, Mich.

Melting Pots

Bartlett Mfg. Co., Detroit, Mich.
Walter E. Clark & Son, Milford, Conn.
Rollin H. Tabor, Mt. Vernon, Ohio

Pruners

Bartlett Mfg. Co., Detroit, Mich.
Henry Disston & Sons, Philadelphia, Pa.
H. K. Porter, Inc., Everett, Mass.
Seymour Smith & Son, Inc., Oakville, Conn.
Carroll R. Tiffany, Conklin, N.Y.
Edwin C. Tyson, Flora Dale, Pa.
J. Wiss & Sons Co., Newark, N.J.

Shears

E. C. Atkins & Co., Indianapolis, Ind.
Bartlett Mfg. Co., Detroit, Mich.
Henry Disston & Sons, Philadelphia, Pa.
Peck, Stow & Wilcox Co., Southington, Conn.
H. K. Porter, Inc., Everett, Mass.
Seymour Smith & Son, Inc., Oakville, Conn.
Carroll R. Tiffany, Conklin, N.Y.
J. Wiss & Sons Co., Newark, N.J.



LAKE CRUISES 7 DAYS \$54.50 ALL EXPENSE

Over 2,130 miles of scenic beauty. Daily programs of dancing, music, floor shows, deck sports and social events. Spacious, modern ballroom. Season July 9 to Sept. 3. Eastbound from Chicago each Friday, Mackinac Island Saturday, Cleveland Sunday. Westbound from Buffalo each Monday, Sault Ste. Marie Wednesday, Mackinac Island Wednesday.

S. S. SEEANDBEE

the largest and most luxurious steamer on the great lakes devoted exclusively to cruise service . . . Exceptional food and service.

WRITE FOR SPECIAL FOLDER. Ask your local Railroad or Travel Agent.

THE C. & B. TRANSIT CO.

Ft. of Erie St. E. 9th Street Pier
BUFFALO, N.Y. CLEVELAND, O.



COMMISSION MERCHANTS AND MARKETING AGENCIES

Commission Merchants

American Fruit Growers, Inc., Pittsburgh, Pa.
 Andrews Bros., Detroit, Mich.
 Atlantic Commission Co., Inc., New York, N.Y.
 A. C. Blair Co., Cleveland, Ohio
 M. Cornfield & Co., St. Louis, Mo.
 Gargiulo & Amendola, New York, N.Y.
 S. A. Gerrard Co., Cincinnati, Ohio
 L. Gillarde Co., Chicago, Ill.
 John Nix & Co., New York, N.Y.
 Pacific Fruit & Produce Co., Portland, Ore.
 C. H. Peacock, Philadelphia, Pa.
 H. J. Riebe, Indianapolis, Ind.
 Martin Rini's Sons, Inc., Cleveland, Ohio
 H. Rubenstein & Co., Milwaukee, Wis.
 Arthur Serra & Co., Chicago, Ill.
 L. Singer & Sons Produce Co., Kansas City, Mo.
 Sweeney Lynes & Co., Boston, Mass.
 C. H. Weaver Co., Chicago, Ill.

Exporters

Barr Shipping Corp., New York, N.Y.
 Sam Birch & Co., Portland, Ore.
 Bly-Robinson Co., Inc., Charles Town, W. Va.
 D. M. Bream Co., Chambersburg, Pa.
 G. H. Corse, Jr. & Co., San Francisco, Calif.
 John F. Deegan & Co., Inc., New York, N.Y.
 R. Dixon & Co., Inc., New York, N.Y.
 Dutchie & Co., Inc., Portland, Ore.
 Export & Import Bureau, Baltimore, Md.
 H. W. Farrell, New York, N.Y.
 L. P. Ginsburg & Co., San Francisco, Calif.

J. H. Goodwin, Ltd., New York, N.Y.
 Gwin, White & Prince, Inc., Seattle, Wash.
 Heidner & Co., Tacoma, Wash.
 C. C. Hess-Watson Co., New York, N.Y.
 Les Fruits De France, Paris, France
 H. M. Mathieson, Glasgow, Scotland
 Alfred W. Otis & Co., Boston, Mass.
 Pacific Fruit & Produce Co., Seattle, Wash.

Ridley & Houlding, Ltd., London, England
 Simons & French Co., New York, N.Y.
 C. S. Smith Fruit Co., Yakima, Wash.

Marketing Agencies

American Fruit Growers, Inc., Pittsburgh, Pa.
 Atlantic Commission Co., Inc., New York, N.Y.

When YOU use AFG...

The complete fresh fruit and vegetable market is always at your command . . . and you know your products are in safe, capable hands.



Twenty years of marketing experience enables us to handle each and every shipment—large or small—to the grower's best advantage. For complete sales satisfaction, use AFG.

AMERICAN FRUIT GROWERS INC.
 General Offices -- Pittsburgh, Pa.

FRUIT PROCESSING

Presses, Fruit

Dunning & Boschert Press Co., Inc., Syracuse, N.Y.
 Enterprise Mfg. Co. of Pa., Philadelphia, Pa.
 A. B. Farquhar Co., Ltd., York, Pa.
 Food Machinery Corp., Anderson-Barnegrover Div., San Jose, Calif.
 A. H. Hafley, Ashley, Ill.
 Hocking Valley Mfg. Co., Lancaster, Ohio
 Hydraulic Press Mfg. Co., Mt. Gilead, Ohio
 New Jersey Agr. Works, Trenton, N.J.
 Palmer Bros. Engines, Inc., Cos Cob, Conn.
 Thomas-Albright Co., Goshen, Ind.
 Edwin C. Tyson, Flora Dale, Pa.
 E. B. Van Atta & Co., Inc., Olean, N.Y.

Sodium Benzoate

Carus Chemical Co., Inc., La Salle, Ill.
 Heyden Chemical Corp., New York, N.Y.
 Mallinckrodt Chemical Works, St. Louis, Mo.
 Monsanto Chemical Co., St. Louis, Mo.
 Seydel Chemical Co., Jersey City, N.J.

SOBENATE

the special

SODIUM BENZOATE
 that does not alter taste

Literature on request

Seydel Chemical Co.

JERSEY CITY, N. J.

20 years producing Benzoate of Soda

JUNE, 1937

JUD HOPKINS* says:

When it comes to cooperation with growers and shippers —by boosting consumption, expanding markets and the like—you've got an excellent example in Atlantic Commission and its affiliate, A&P. For instance, take that bumper crop of grapefruit. These concerns put on a nation-wide drive—with advertising in hundreds of newspapers, broadcasting over 46 radio stations, features in the A&P Menus, posters in A&P Stores. During eight weeks they increased their last year's volume by 3½ times. And of equal importance to the growers, at the end of the drive they were receiving 20¢ to 25¢ more a box than at the start of it! This cooperation sure was a big help to the citrus growers, and it's typical of the way Atlantic Commission operates—stimulating consumption and at the same time strengthening the market.



* "Jud Hopkins" is a representative of those successful growers and shippers living in every community.

ATLANTIC COMMISSION CO., INC.

Executive offices: Warren & Washington Sts., N. Y. C.

Affiliate of The Great Atlantic & Pacific Tea Co.

FERTILIZERS

Agricultural Lime

American Lime & Stone Co., Bellefonte, Pa.
Central Chemical Co., Inc., Baltimore, Md.
France Stone Co., Toledo, Ohio
Gibsonburg Lime Products Co., Gibsonburg, Ohio
Marblehead Lime Co., Chicago, Ill.
Ohio Hydrate & Supply Co., Woodville, Ohio
Scioto Lime & Stone Co., Delaware, Ohio

Ammonium Phosphate

American Cyanamid Co., Fertilizer Div., New York, N.Y.

Calcium Cyanamid

American Cyanamid Co., Fertilizer Div., New York, N.Y.



Calcium Nitrate

Synthetic Nitrogen Products Corp., New York, N.Y.

Gypsum

American Gypsum Co., Port Clinton, Ohio
Central Chemical Co., Inc., Baltimore, Md.
U. S. Gypsum Co., Chicago, Ill.

Manganese Sulphate

Carus Chemical Co., La Salle, Ill.
Tennessee Corp., Lockland, Ohio
Tennessee Eastman Corp., Kingsport, Tenn.
Mixed Fertilizers, Commercial
Armour Fertilizer Works, Atlanta, Ga.
Central Chemical Co., Inc., Baltimore, Md.
Darling & Co., Chicago, Ill.
Federal Chemical Co., Louisville, Ky.
Stimulant Laboratories, Inc., Long Island City, N.Y.
Tennessee Corp., Lockland, Ohio

Nitrate of Lime
Central Chemical Co., Inc., Baltimore, Md.

Nitrate of Potash
Battelle & Renwick, New York, N.Y.

Nitrate of Soda

Armour Fertilizer Works, Atlanta, Ga.
Barrett Co., New York, N.Y.
Battelle & Renwick, New York, N.Y.
Central Chemical Co., Inc., Baltimore, Md.
Chilean Nitrate Sales Corp., New York, N.Y.
Smith Agr. Chemical Co., Columbus, Ohio

Potash Salts

American Potash & Chemical Corp., New York, N.Y.
Armour Fertilizer Works, Atlanta, Ga.
Central Chemical Co., Inc., Baltimore, Md.
Darling & Co., Chicago, Ill.
N. V. Potash Export My., Inc., New York, N.Y.
Potash Co. of America, Baltimore, Md.
Smith Agr. Chemical Co., Columbus, Ohio
U. S. Potash Co., New York, N.Y.

Sulphate of Ammonia

Armour Fertilizer Works, Atlanta, Ga.
Barrett Co., New York, N.Y.
Central Chemical Co., Inc., Baltimore, Md.
Darling & Co., Chicago, Ill.
Smith Agr. Chemical Co., Columbus, Ohio

Sulphur

National Sulphur Co., Inc., New York, N.Y.
Stauffer Chemical Co., New York, N.Y.

Superphosphate

Armour Fertilizer Works, Atlanta, Ga.
Central Chemical Co., Inc., Baltimore, Md.
Darling & Co., Chicago, Ill.
Smith Agr. Chemical Co., Columbus, Ohio

Urea

E. I. du Pont de Nemours & Co., Inc.,
Fertilizer Dept., Wilmington, Del.

OPPORTUNITY ADS

Only 15c a Word—CASH WITH ORDER
ADDRESS: AMERICAN FRUIT GROWER,
1370 Ontario Street, Cleveland, Ohio

BASKET TURNERS

COWL BASKET TURNER, BENCH STYLE, TURNED
over 2,000 baskets per day and gives an even finish. Price
\$15.00 plus postage. Dealer proposition. FRUIT
PACKING EQUIPMENT COMPANY, Swoope, Virginia.

BEES

BEES FOR CROSS POLLINIZING FRUIT BLOOM OR
raising honey. Write for prices. D. C. JACKSON, Funston,
Georgia.

CROTALARIA SEED

CROTALARIA SPECTABILIS SEED: HEAVIEST LEA-
vage cover crop. Reserve now. GRAND ISLAND NUM-
ERIES, Eustis, Florida.

FEMALE HELP WANTED

WOMEN WANTED TO PLAIT AND HAND STITCH
light leather table runners at home. Good pay. Experi-
ence unnecessary. Write Dept. 587. Leather Craft, 68
Bay St., Toronto, Ontario.

FOR SALE

FOR SALE—"BEAN" SPRAYER, ROYAL 30 PUMP,
300 gallon tank, 12 h.p. LeRoi engine, 2 sets lines, 2
Bean guns. In A-1 condition, at a bargain. LUTHER
CREASY, Catawissa, Pennsylvania.

"BEAN" FRUIT POLISHING-SORTING MACHINE
Practically new. Bargain. LOU HOLCOMBE, West Simsbury,
Connecticut.

HOSE SWIVELS

TODD ORIGINAL HOSE SWIVEL, \$1.25 EACH. A. B.
TODD, Vermilion, Ohio.

HOSIERY

BEAUTIFUL QUALITY HOSIERY—5 PAIRS \$1 (Also
Neeli) (Fulfashioned—3 prs. \$1) DIRECTCO, AFREW
Broad, Savannah, Georgia.

MISCELLANEOUS

CANARY BIRD BREEDERS USE CANARY VITATION
for best results. At pet seed stores—20c—50c—\$1.50 or
write for Leaflet O. HI-DROX CO., Times Building, New
York City.

PATENTS

National Trade Mark Company
Munsey Building
Washington, D. C.
Trade Mark Specialists

PATENTS, LOW COST. BOOK AND ADVICE FREE
L. F. RANDOLPH, Dept. 568-A, Washington, D. C.

PHOTO FINISHING

FILMS DEVELOPED AND PRINTED, INCLUDING
two beautiful olive tone enlargements Free. 25c COIN.
UNITED PHOTO SERVICE, La Crosse, Wisconsin.

FILMS DEVELOPED ANY SIZE, 25c COIN, INCLUDING
two enlargements. CENTURY PHOTO SERVICE
Box 829, La Crosse, Wisconsin.

POROUS IRRIGATION HOSE

IRRIGATION PAYS—WRITE ABOUT POROUS HOSE
irrigating. B. & B. IRRIGATING SYSTEM. Port Clinton,
Ohio.

ROOF COATING

SIX DRUMS EVERBRITE SAVED CUSTOMER \$55.
Three drums Everbrite saved farmer \$320. Everbrite stops
every leak, builds new roof. Write EVERBRITE FACTORY,
Franklin, Indiana.

SPRAYER VALVES

JOBBERS AND GROWERS WRITE FOR PRICES AND
catalog. Complete line of Sprayer Valves. CENTRAL
BRASS MANUFACTURING COMPANY, 2950 E. 55th
Cleveland, Ohio.

TOBACCO

POSTPAID: MILD, MELLOW, CLEAN REDLEAF
chewing 10 pounds \$1.50; smoking \$1.25. F. WAIN-
COTT, Sharon, Tennessee.

TREE BANDS

BETA-NAPTHOL TREATED TREE BANDS "BURE
KILL" the codling moth worms. Write for prices and free
literature. M. A. KOELLER, Barry, Illinois.

WANTED

WANTED MARCH 1, 1938: TENANT TO SHARE 100-
acre fruit farm, shore Seneca Lake, Hammondsport. Cows, pigs,
poultry, bees, vineyard, orchard. Owner furnish house and
trees. Tenant furnish one-half stock, tools. Good build-
ings, electricity. See farm, then HARRY H. BATES,
Elmira, New York.

JUNE, 1937

FENCING AND TRELLISES

Augers, Post Hole

Brown Fence & Wire Co., Cleveland, Ohio
Iwan Bros., South Bend, Ind.
Kitselman Bros., Muncie, Ind.

Gates

American Steel & Wire Co., Chicago, Ill.
Anchor Post Fence Co., Baltimore, Md.
Brown Fence & Wire Co., Cleveland, Ohio
Continental Steel Corp., Kokomo, Ind.
Cyclone Fence Co., Waukegan, Ill.
Kitselman Bros., Muncie, Ind.
Wickwire Spencer Steel Co., New York, N.Y.

Posts

Brown Fence & Wire Co., Cleveland, Ohio
Calumet Steel Co., Chicago, Ill.
Kitselman Bros., Muncie, Ind.
Page Steel & Wire Div., American Chain
Co., Inc., Monessen, Pa.

Wire

American Steel & Wire Co., Chicago, Ill.
Bethlehem Steel Co., Bethlehem, Pa.
Brown Fence & Wire Co., Cleveland, Ohio
Continental Steel Corp., Kokomo, Ind.
Interlocking Fence Co., Morton, Ill.
Kitselman Bros., Muncie, Ind.
Page Steel & Wire Div., American Chain
Co., Inc., Monessen, Pa.
Pittsburgh Steel Co., Pittsburgh, Pa.
Republic Steel Corp., Chicago, Ill.
Wheeling Corrugating Co., Wheeling,
W. Va.
Wickwire Spencer Steel Co., New York,
N.Y.

Jim Brown FENCING Direct From FACTORY

Write today for my new
Big Money-Saving Fence
Catalog. It quotes Direct-from-
Factory Prices on over 200 styles
Farm and Poultry Fence.

I PAY THE FREIGHT
Also big selection of bargains in Gates, Steel Posts,
Barb Wire, Roofing, Paint and other Farm and Home
needs. Catalog free. Write nearest office.—Jim Brown,
Brown Fence & Wire Co., Dept. 100, Cleveland, O., Memphis, Tenn.

AMERICAN FRUIT GROWER



NEW SUPER-QUALITY KITSELMAN FENCE

Heavier, tougher pure zinc galvanizing.
Stronger, tougher Copper-Bearing
Steel. Some low Factory Prices.
WE PAY FREIGHT. 100 styles and
heights. Farm, Poultry and Lawn
Fence; Steel Posts, Gates, Barb Wire,
Paints, Roofing. Write today.
KITSELMAN BROTHERS
Muncie, Indiana

Box 206

PAGE 46

DS
ORDER
POWER,
Ohio

M. TURNER
Fruit
Co., Virginia

BLOOM OR
ON, Florida

WEST END
AND NUMBER

ED STITCH
AT: Repro-
Crafts, Ill.

20 PUMP
Oil, Gas, 2
LUTHER

MACHINE
West Side

CH. A. R.

\$1. (ALSO
\$1. AFTER

VITATONE
\$1.50 or
Building, New

CS FREE
D. C.

CLUDING
25c Cola
usa.

INCLUDE-
SERVICE

E

US HOSE
Port Ch-

ER 1850.
title signs
FACTORY.

ICES AND
CENTRAL
E. E. 55.

EDLEAF
WAINS-

"SUE
and free

RE 100-
75, plus
10% build-
HAYS.

E. INT

FOR MORE WORK AND GREATER SAVINGS



SEE GMC
THE TRUCK OF VALUE

THE MODERN, quality features found in a GMC truck definitely assure more work and greater savings for owners. Take the GMC half-ton, for instance. You can have it with either 112-inch or 126-inch wheelbase—complete with the biggest standard pick-up body available anywhere. Take the 1½-2 ton, if that size of GMC better fits your needs. It, too, provides extra loading space because of proper weight distribution. Then, for greater driver comfort and safety, there's the GMC all-steel "Helmet-Top"

cab. And to assure improved performance with economy, both ½-ton and ½-2 ton GMC's have rugged clutches and transmissions, rear axles of the correct size and type and dozens of mechanical refinements, such as full-pressure engine lubrication, that actually save many dollars for owners. By all means see, inspect and compare a GMC. Admire its advanced stream-styled appearance. You'll find it a value through and through. You'll find its price surprisingly low.

QUALITY AT PRICES LOWER THAN AVERAGE

Our own Y. M. A. C. Plan assures you of lowest available rates

GENERAL MOTORS TRUCKS & TRAILERS

GENERAL MOTORS TRUCK & COACH

DIVISION OF

YELLOW TRUCK & COACH MANUFACTURING COMPANY, PONTIAC, MICHIGAN

BASI-COP *for CHERRIES*

A NEW FORM OF COPPER SULFATE

You can grow better sour cherries (and with greater safety for the crop) by using Sherwin-Williams BASI-COP to control Leaf Spot without causing yellowing and premature dropping of foliage. BASI-COP is SAFER, as well as BETTER, because it does not reduce the size of the cherries. Remember the name—Sherwin-Williams BASI-COP for better cherries.

BASI-COP *for APPLES*

Better! More Convenient! SAFER!!! These three features make Sherwin-Williams BASI-COP (a new form of copper sulfate) an outstanding substitute for old style, unsatisfactory Bordeaux Mixture for effective control of Late Scab and Blotch of apples. BASI-COP does not russet apples as seriously as Bordeaux Mixture, nor does it cause yellowing or spotting of apple leaves.

BASI-COP *for GRAPES*

If you grow grapes remember the name Sherwin-Williams BASI-COP for its use will enable you to grow BETTER GRAPES. Sherwin-Williams BASI-COP controls Black Rot of grapes and at the same time this new and more convenient form of copper sulfate will not stain the fruit as does old-style Bordeaux Mixture. Remember the name—Sherwin-Williams BASI-COP.

WRITE FOR FREE FOLDERS TELLING WHY BASI-COP IS BETTER



THE SHERWIN-WILLIAMS CO.
Insecticide Department
101 Prospect Ave. Cleveland, Ohio.

SHERWIN-WILLIAMS

SPRAY AND DUST MATERIALS